e also for 10/003,635


```
=> file reg
FILE 'REGISTRY' ENTERED AT 12:59:04 ON 23 DEC 2002
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STRUCTURE FILE UPDATES:   22 DEC 2002  HIGHEST RN 477520-59-5
DICTIONARY FILE UPDATES:  22 DEC 2002  HIGHEST RN 477520-59-5

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

  Please note that search-term pricing does apply when
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Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> file hcaplus
FILE 'HCAPLUS' ENTERED AT 12:59:09 ON 23 DEC 2002
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FILE COVERS 1907 - 23 Dec 2002  VOL 137 ISS 26
FILE LAST UPDATED: 22 Dec 2002  (20021222/ED)

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information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> d que
L1          249 SEA FILE=HCAPLUS ABB=ON  SALAMONE J?/AU
L38             SCR 2043
L40             STR
```

```
                    4
                   G1

G2- O           O  Si
 6  @7          1    2
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46,273 polymers from this query

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VAR G1=AK/CB/7
VAR G2=AK/CB
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   5

STEREO ATTRIBUTES: NONE
L42       46273 SEA FILE=REGISTRY SSS FUL L40 AND L38
L43             STR

C==C
1  2
```

← Subset search - covers styryl, acrylic, itaconic, etc

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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   2

STEREO ATTRIBUTES: NONE
L46       24455 SEA FILE=REGISTRY SUB=L42 SSS FUL L43
L47       14586 SEA FILE=HCAPLUS ABB=ON  L46
L48         725 SEA FILE=HCAPLUS ABB=ON  L47 AND (LENS? OR EYE? OR OPHTHALM?)
L49        7926 SEA FILE=HCAPLUS ABB=ON  L47(L)(PREP OR IMF OR SPN)/RL
L50         504 SEA FILE=HCAPLUS ABB=ON  L48 AND L49
L51          32 SEA FILE=HCAPLUS ABB=ON  L50 AND REFRACT?
L52           5 SEA FILE=HCAPLUS ABB=ON  L1 AND L47
L53          37 SEA FILE=HCAPLUS ABB=ON  L51 OR L52
L54        1556 SEA FILE=REGISTRY ABB=ON  L46 AND 1-6/CL
L55          19 SEA FILE=REGISTRY ABB=ON  L54 AND CHLOROSILAN?
L56          17 SEA FILE=HCAPLUS ABB=ON  L55
L57          11 SEA FILE=HCAPLUS ABB=ON  L49 AND L56
L58           0 SEA FILE=HCAPLUS ABB=ON  L57 AND REFRACT?
L59           0 SEA FILE=HCAPLUS ABB=ON  L57 AND LENS?
L60           0 SEA FILE=HCAPLUS ABB=ON  L57 AND (EYE? OR OPHTHAL?)
L61          37 SEA FILE=HCAPLUS ABB=ON  L53 OR L58 OR L59 OR L60

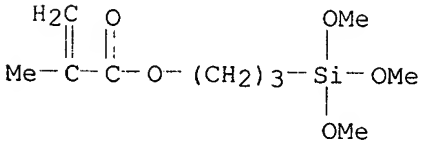

=> d l61 bib abs hitind hitstr 1-37

L61  ANSWER 1 OF 37  HCAPLUS  COPYRIGHT 2002 ACS
AN   2002:580394  HCAPLUS
DN   137:270326
TI   Direct photolithographic deforming of organomodified siloxane films for
     microoptics fabrication
AU   Karkkainen, Ari H. O.; Tamkin, John M.; Rogers, Jeremy D.; Neal, Daniel
```

R.; Hormi, Osmo E.; Jabbour, Ghassan E.; Rantala, Juha T.; Descour, Michael R.
CS VTT Electronics, Oulu, FIN-90571, Finland
SO Applied Optics (2002), 41(19), 3988-3998
CODEN: APOPAI; ISSN: 0003-6935
PB Optical Society of America
DT Journal
LA English
AB Direct photolithog. deforming of hybrid glass films is used to fabricate optical structures. The structure is fabricated in polyethylene oxide-acrylate modified hybrid glass films with (1) binary and gray-scale photomasks using a mercury UV-lamp exposure and (2) maskless UV-laser patterning. Fabrication of isolated **lenslets**, **lens** arrays, and gratings is presented, including the assocd. exposure patterns. The hybrid glass material yields light-induced deformation peak-to-valley (p.v.) heights up to 12.8 .mu.m with mercury UV-lamp exposure and p.v. deformation heights up to 6.8 .mu.m with 365-nm UV-laser exposure. The fabricated **lenslets'** surface data are presented as Zernike-polynomial fit coeffs. Material synthesis and processing-related aspects are examd. to understand and control the material's deformation under exposure. The hybrid glass material exhibits a max. spectral extinction coeff. of 1.6 .times. 10-3 .mu.m-1 at wavelengths ranging from 450 to 2200 nm and has a **refractive** index of 1.52 at 632.8 nm. The fabricated structures exhibit rms surface roughness between 1 and 5 nm.
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73
ST photolithog deforming organomodified siloxane hybrid glass film microoptical element; **lens** array photolithog deforming organomodified siloxane hybrid glass film; diffraction grating photolithog deforming organomodified siloxane hybrid glass film
IT Diffraction gratings
Hybrid organic-inorganic materials
Lenses
Microlenses
Photolithography
Refractive index
Surface roughness
(fabrication of microoptical structures in polyethylene oxide-acrylate modified hybrid siloxane glass films by photolithog. deformation)
IT **66451-46-5DP**, 3-(Glycidoxypropyl)trimethoxysilane-3-(methacryloxypropyl)trimethoxysilane copolymer, hydrolyzed
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; PROC (Process); RACT (Reactant or reagent)
(siloxane prepolymer; prepn. of polyethylene oxide-acrylate modified hybrid glass films for photolithog. fabrication of microoptical structures)
IT 66451-46-5DP, 3-(Glycidoxypropyl)trimethoxysilane-3-(methacryloxypropyl)trimethoxysilane copolymer, hydrolyzed
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; PROC (Process); RACT (Reactant or reagent)
(siloxane prepolymer; prepn. of polyethylene oxide-acrylate modified hybrid glass films for photolithog. fabrication of microoptical structures)
RN 66451-46-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

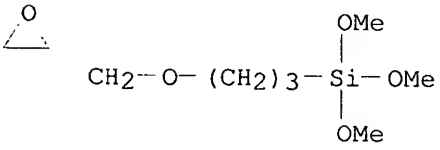
CM 1

CRN 2530-85-0
CMF C10 H20 O5 Si



CM 2

CRN 2530-83-8
CMF C9 H20 O5 Si



RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 2 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:553159 HCAPLUS
DN 137:110254
TI Radiation-curable acrylic fluoropolymer compositions with low **refractive** index
IN Takano, Kiyoshi; Yamaguchi, Hirofumi; Yamaoka, Seiji; Kinoshita, Hiroshi
PA Dainippon Ink and Chemicals, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

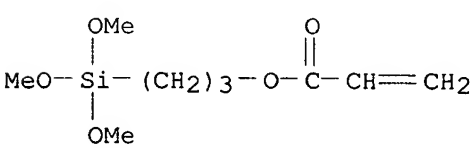
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002206010	A2	20020726	JP 2001-191121	20010625
PRAI JP 2000-341784	A	20001109		

AB The compns., having **refractive** index of .ltoreq.1.45 and Shore D hardness of .gtoreq.80 after curing, contain CH2:CR1CO2(CH2)k(CF2)l(CH2)kO 2CCR1:CH2 (R1 = H, Me, F, Cl; k = 1, 2; l = 1-20) and other monomers bearing (meth)acryloyl groups. Thus, a compn. comprising CH2:CHCO2CH2(CF2)4CH2O2CCH:CH2 98.5, .gamma.-acryloxypropyltrimethoxysilan e 1.0, and photoinitiator 0.5 part was cured by UV-irradn. to give a test piece showing **refractive** index 1.430 and Shore D hardness 88. Then, a **lens** comprising sequential layers of a quartz glass, a high **refractive** layer manuf. by curing a reaction product of 2-hydroxyethyl acrylate with 2-butyl-2-ethylpropanediol-4,4'-MDI copolymer, a low **refractive** layer manufd. by curing the compn., and a quartz glass showed good heat and solvent resistance.
IC ICM C08F220-24

ICS G02B001-04; G02B006-00; G02B006-12
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73
ST radiation curable acrylic fluoropolymer **lens**; heat resistance acrylic fluoropolymer **lens**; solvent resistance acrylic fluoropolymer **lens**
IT Polyurethanes, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic, high **refractive** layers; radiation-curable fluorine-contg. acrylic polymer compns. with low **refractive** index for **lenses**)
IT Fluoropolymers, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic; radiation-curable fluorine-contg. acrylic polymer compns. with low **refractive** index for **lenses**)
IT **Lenses**
(radiation-curable fluorine-contg. acrylic polymer compns. with low **refractive** index for)
IT 818-61-1DP, 2-Hydroxyethyl acrylate, reaction product with polyurethane, homopolymer 132827-69-1DP, 2-Butyl-2-ethyl-1,3-propanediol-4,4'-MDI copolymer, reaction product with 2-hydroxyethyl acrylate, homopolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(high **refractive** layers; radiation-curable fluorine-contg. acrylic polymer compns. with low **refractive** index for **lenses**)
IT 140127-74-8P **443790-94-1P**, .gamma.-Acryloxypropyltrimethoxysilane-2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediol diacrylate copolymer 443790-95-2P 443790-96-3P 443790-97-4P 443790-98-5P 443790-99-6P 443791-01-3P
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(radiation-curable fluorine-contg. acrylic polymer compns. with low **refractive** index for **lenses**)
IT **443790-94-1P**, .gamma.-Acryloxypropyltrimethoxysilane-2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediol diacrylate copolymer
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(radiation-curable fluorine-contg. acrylic polymer compns. with low **refractive** index for **lenses**)
RN 443790-94-1 HCAPLUS
CN 2-Propenoic acid, 2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl ester, polymer with 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX NAME)

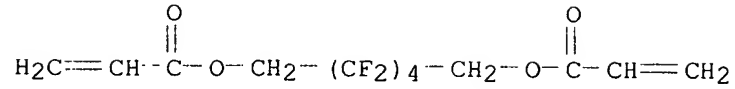
CM 1

CRN 4369-14-6
CMF C9 H18 O5 Si



CM 2

CRN 2264-01-9
CMF C12 H10 F8 O4



L61 ANSWER 3 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:487626 HCAPLUS
DN 137:47630
TI Polymeric biomaterials containing silsesquioxane monomers
IN Bonafini, James A., Jr.; Salamone, Joseph C.
PA Bausch & Lomb Incorporated, ~~USA~~ applicant
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

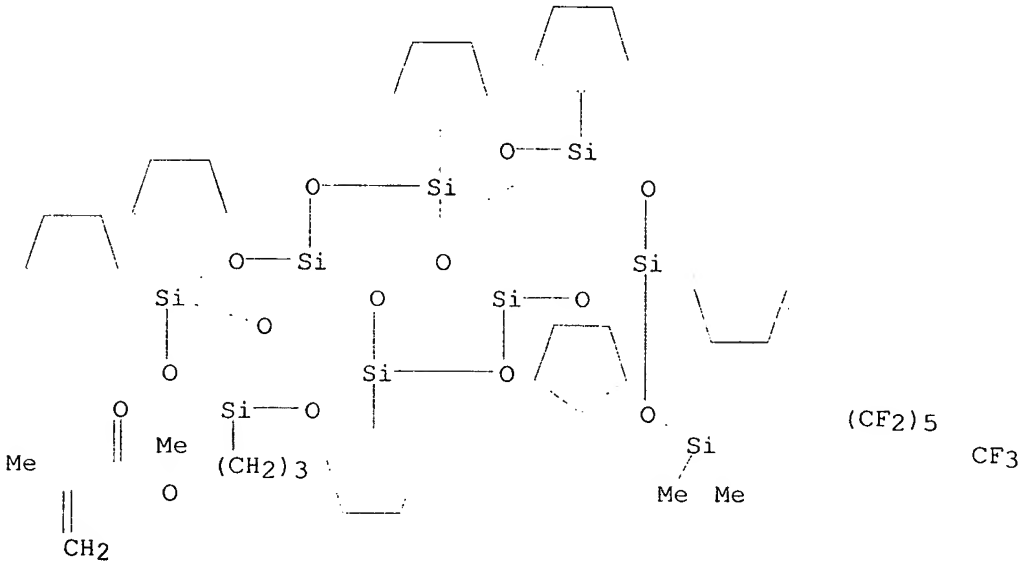
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002050144	A2	20020627	WO 2001-US46500	20011203
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002030604	A5	20020701	AU 2002-30604	20011203
	US 2002128414	A1	20020912	US 2001-23557	20011217
PRAI	US 2000-256712P	P	20001219		
	WO 2001-US46500	W	20011203		

AB Biocompatible copolymer is produced by polymg. a mixt. comprising .gtoreq.1 monomer selected from itaconates, (meth)acrylates, fumarates and styrenics, .gtoreq.1 ethylenically unsatd. organosiloxane monomer and .gtoreq.1 monomer comprising a polyhedral oligomeric silsesquioxane (POSS) compd. Methacrylate Bu styrene POSS silylpropylmethacrylate vinylpyrrolidone acrylsiloxane copolymer.
IC ICM C08F230-08
CC 35-4 (Chemistry of Synthetic High Polymers)
IT **438586-30-2P 438586-31-3P**
RL: IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(clear tough silsesquioxane-contg. copolymers with oxygen permeability for lens)
IT **438586-30-2P 438586-31-3P**
RL: IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(clear tough silsesquioxane-contg. copolymers with oxygen permeability for lens)
RN 438586-30-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with (1,1-dimethylethyl)ethenylbenzene, .alpha.-[dimethyl[4-[(2-methyl-1-oxo-2-propenyl)oxy]butyl]silyl]-.omega.-[[dimethyl[4-[(2-methyl-1-oxo-2-propenyl)oxy]butyl]silyl]oxy]poly[oxy(dimethylsilylene)], 2,2-dimethyl-1,3-propanediyl bis(2-methyl-2-propenoate), 1-ethenyl-2-pyrrolidinone, 3-[1,3,5,9,11,13,15-heptacyclopentyl-13-[[dimethyl(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)silyl]oxy]-7-methyltetracyclo[9.5.1.13,9.15,15]octasiloxan-7-yl]propyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

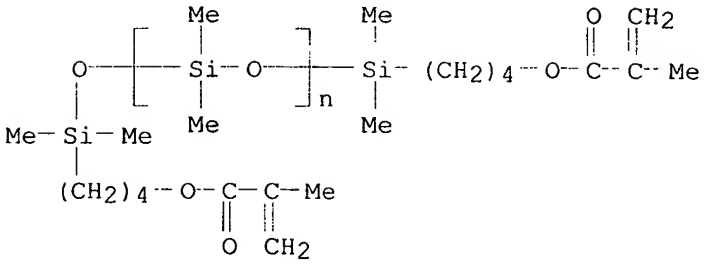
CM 1

CRN 314727-22-5
CMF C53 H87 F13 O14 Si9



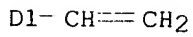
CM 2

CRN 70877-62-2
CMF (C2 H6 O Si)n C20 H38 O5 Si2
CCI PMS



CM 3

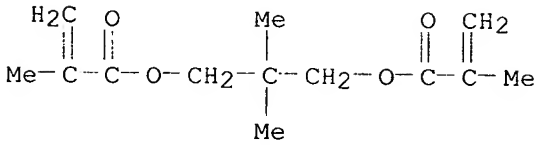
CRN 25338-51-6
CMF C12 H16
CCI IDS



D1 — Bu-t

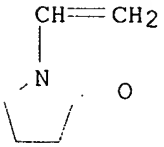
CM 4

CRN 1985-51-9
CMF C13 H20 O4



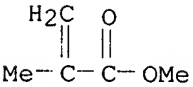
CM 5

CRN 88-12-0
CMF C6 H9 N O



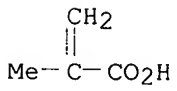
CM 6

CRN 80-62-6
CMF C5 H8 O2



CM 7

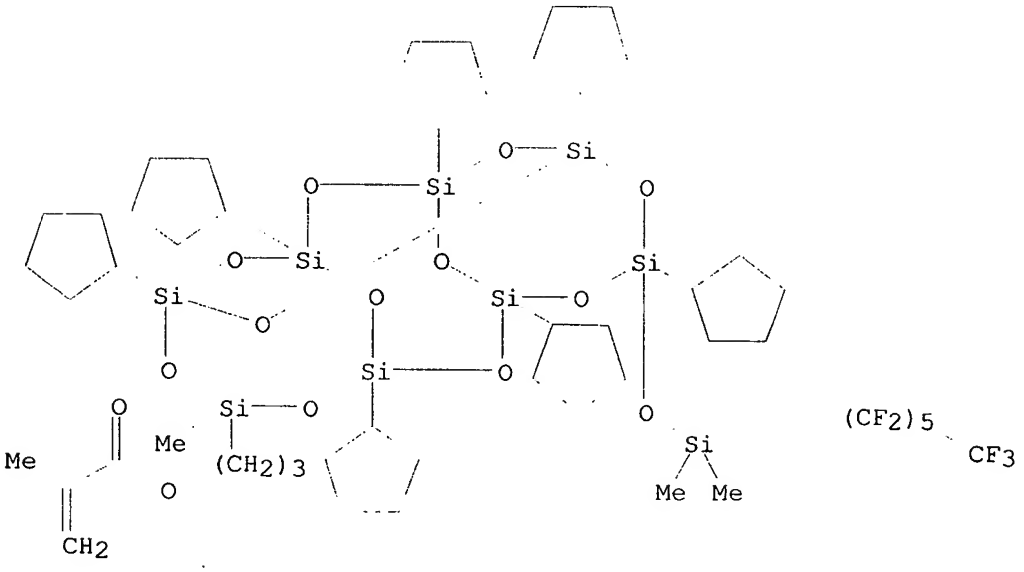
CRN 79-41-4
CMF C4 H6 O2



RN 438586-31-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with (1,1-dimethylethyl)ethenylbenzene, .alpha.-[dimethyl[4-[(2-methyl-1-oxo-2-propenyl)oxy]butyl]silyl]-.omega.-[[dimethyl[4-[(2-methyl-1-oxo-2-propenyl)oxy]butyl]silyl]oxy]poly[oxy(dimethylsilylene)], 2,2-dimethyl-1,3-propanediyl bis(2-methyl-2-propenoate), 1-ethenyl-2-pyrrolidinone, 3-[1,3,5,9,11,13,15-heptacyclopentyl-13-[[dimethyl(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoroctyl)silyl]oxy]-7-methyltetracyclo[9.5.1.13,9.15,15]octasiloxan-7-yl]propyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

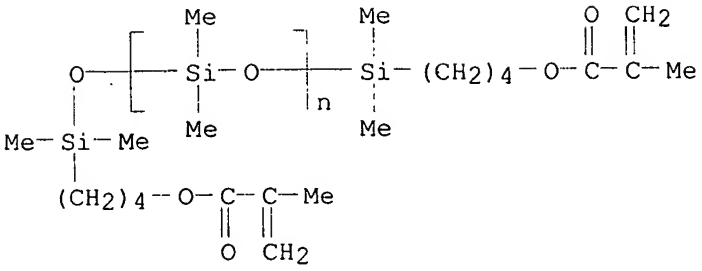
CM 1

CRN 314727-22-5
CMF C53 H87 F13 O14 Si9



CM 2

CRN 70877-62-2
CMF (C2 H6 O Si)n C20 H38 O5 Si2
CCI PMS



CM 3

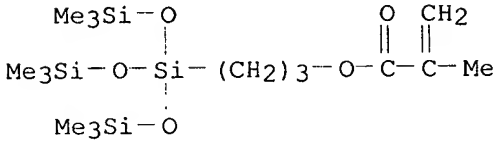
CRN 25338-51-6
CMF C12 H16
CCI IDS

D1-- CH=== CH_2

D1-- Bu-t

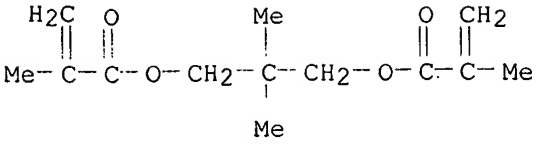
CM 4

CRN 17096-07-0
CMF C16 H38 O5 Si4



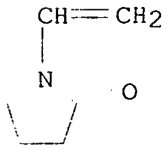
CM 5

CRN 1985-51-9
CMF C13 H20 O4



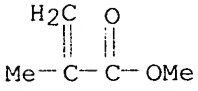
CM 6

CRN 88-12-0
CMF C6 H9 N O



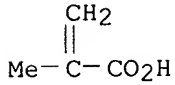
CM 7

CRN 80-62-6
CMF C5 H8 O2



CM 8

CRN 79-41-4
CMF C4 H6 O2



L61 ANSWER 4 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:307198 HCAPLUS
DN 137:116871
TI Siloxane-based hybrid glass materials for binary and gray-scale mask photoimaging
AU Karkkainen, Ari H. O.; Rantala, Juha T.; Maaninen, Arto; Jabbour, Ghassan E.; Descour, Michael R.
CS VTT Electronics, Oulu, FIN-90570, Finland
SO Advanced Materials (Weinheim, Germany) (2002), 14(7), 535-540
CODEN: ADVMEW; ISSN: 0935-9648
PB Wiley-VCH Verlag GmbH
DT Journal
LA English

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

AB The fabrication of microoptical and optomech. structures by applying photoimaging of hybrid glass materials is discussed. The optical and optomech. structures are fabricated simultaneously in a single lithog. step. Gray-scale and binary photomasks have been successfully applied for the fabrication of **lens** arrays to a max. **lens** sag of 102 .mu.m and of optomech. structures to a max. height of 140 .mu.m. Alignment-aiding optomech. structures can be patterned simultaneously with optical structures in the hybrid glass to fabricate microoptical elements. No chem. or dry etch transfer of the imaged structures is required. The fabricated **lenslets** and the optomech. structures show high surface and optical quality. The fabricated hybrid glass surfaces can be coated with interference coatings utilizing std. deposition procedures. Photoimaging of hybrid glass materials simplifies the fabrication of the optical components and enables new optics integration options.

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 73

IT Microlenses
(refractive; photoimaging of siloxane-based neg-tone hybrid glass materials in fabrication of microoptical and optomech. structures)

IT **442874-00-2P,** Phenyltrimethoxysilane-[3-(Methacryloyloxy)propyl]trimethoxysilane-trimethylolpropane trimethacrylate copolymer
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); **SPN (Synthetic preparation); PREP (Preparation);** PROC (Process)
(crosslinked; photoimaging of siloxane-based neg-tone hybrid glass materials in fabrication of microoptical and optomech. structures)

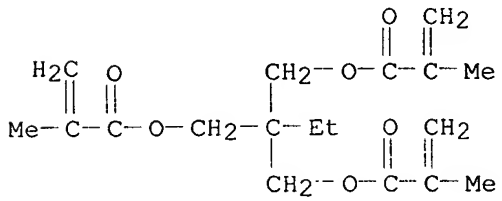
IT **442874-00-2P,** Phenyltrimethoxysilane-[3-(Methacryloyloxy)propyl]trimethoxysilane-trimethylolpropane trimethacrylate copolymer
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); **SPN (Synthetic preparation); PREP (Preparation);** PROC (Process)
(crosslinked; photoimaging of siloxane-based neg-tone hybrid glass materials in fabrication of microoptical and optomech. structures)

RN 442874-00-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethyl-2-[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with trimethoxyphenylsilane and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

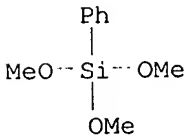
CM 1

CRN 3290-92-4
CMF C18 H26 O6



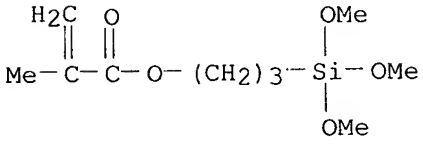
CM 2

CRN 2996-92-1
CMF C9 H14 O3 Si



CM 3

CRN 2530-85-0
CMF C10 H20 O5 Si



RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 5 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:240867 HCAPLUS
DN 136:284491
TI Polymeric coating for contact lenses
IN McGee, Joseph A.; Valint, Paul L., Jr.; Bonafini, James A., Jr.; Salamone, Joseph C.
PA Bausch & Lomb Incorporated, USA
SO PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002024793	A1	20020328	WO 2001-US23028	20010720
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2001082933	A5	20020402	AU 2001-82933	20010720
PRAI	US 2000-665355	A	20000919		
	WO 2001-US23028	W	20010720		

AB The present invention is directed toward the renewable surface treatment of medical devices such as contact lenses and medical implants. In particular, the present invention is directed to a method of modifying the surface of a medical device to increase its biocompatibility or

hydrophilicity by coating the device with a removable hydrophilic polymer by means of reaction between reactive functionalities on the hydrophilic polymer which functionalities are complementary to reactive functionalities on or near the surface of the medical device at reaction temps. of <55.degree.. Thus, a formulation for a silicone hydrogel lens material was prepd. from tris(trimethylsiloxy)silylpropyl vinylcarbamate 55, N-vinyl-2-pyrrolidinone 30, a silicone-contg. vinyl carbonate 15, N-vinyloxycarbonylalanine 1, n-nonanol 15, Darocur 0.2, and 1,4-bis[4-(2-methacryloyloxyethyl)phenylamino]anthraquinone 0.05 parts by wt.

IC ICM C08J007-04
ICS A61L027-34; G02B001-04

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 37, 42

IT **158483-22-8**, Balafilcon A
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(polymeric coating for contact lenses)

IT **158483-22-8**, Balafilcon A
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(polymeric coating for contact lenses)

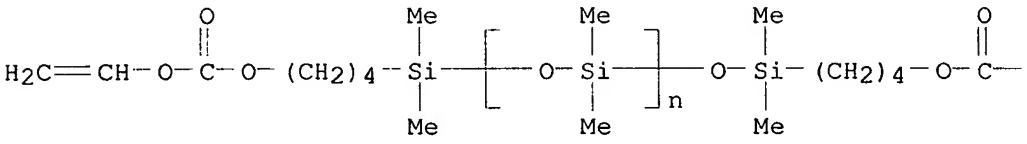
RN 158483-22-8 HCAPLUS

CN .beta.-Alanine, N-[(ethenyloxy)carbonyl]-, polymer with .alpha.-[[4-[[(ethenyloxy)carbonyl]oxy]butyl]dimethylsilyl]-.omega.-[[[4-[[(ethenyloxy)carbonyl]oxy]butyl]dimethylsilyl]oxy]poly[oxy(dimethylsilylene)], 1-ethenyl-2-pyrrolidinone and ethenyl [3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl]carbamate (9CI) (CA INDEX NAME)

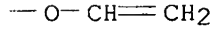
CM 1

CRN 158483-21-7
CMF (C2 H6 O Si)n C18 H34 O7 Si2
CCI PMS

PAGE 1-A

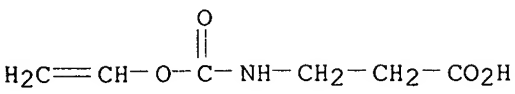


PAGE 1-B



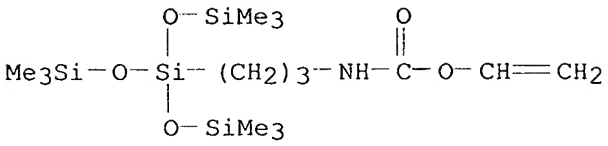
CM 2

CRN 148969-96-4
CMF C6 H9 N O4



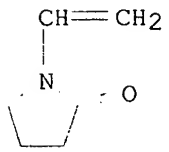
CM 3

CRN 134072-99-4
CMF C15 H37 N O5 Si4



CM 4

CRN 88-12-0
CMF C6 H9 N O



RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 6 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:84156 HCAPLUS
DN 136:136363
TI Optical components with hard coating films and their manufacture
IN Ito, Takanobu
PA Hoya Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

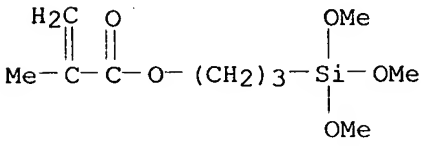
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002030250	A2	20020131	JP 2000-215907	20000717

OS MARPAT 136:136363
AB Title components are prepd. from coatings contg. colloidal metal oxide particles, org. Si compds., and Rp-substituted phenols (R = C1-20 alkyl; n = 0-2 as adhesion promoters. A compn. contg. 3-glycidoxypropyltrimethoxysilane, MeOH sol of ZrO2/WO3/SiO2/SnO2 composite [with **refractive** index RI of 1.76], HCl, 2-methyl-5-isopropylphenol, and an Al chelate was directly coated on a plastic plate with RI 1.60 and cured at 120.degree. for 1 h to form a film with good adhesion initially and under moisture condition.
IC ICM C09D183-04

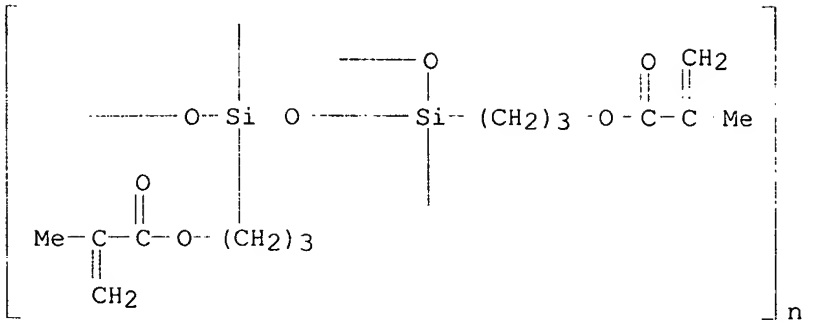
ICS C08J007-06; C09D183-14; G02B001-10; C08L101-00
CC 42-10 (Coatings, Inks, and Related Products)
IT **Lenses**
(alkylphenol- and colloidal metal oxide-contg. siloxane coatings with good adhesion to optical plastics)
IT Plastics, miscellaneous
RL: MSC (Miscellaneous)
(**lens**; alkylphenol- and colloidal metal oxide-contg. siloxane coatings with good adhesion to optical plastics)
IT **52004-97-4P**, 3-Methacryloxypropyltrimethoxysilane homopolymer
56325-93-0P, 3-Glycidoxypropyltrimethoxysilane homopolymer
159338-14-4P, 3-Methacryloxypropyltrimethoxysilane homopolymer, sru 162477-44-3P, 3-Glycidoxypropyltrimethoxysilane homopolymer, ladder, sru
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(alkylphenol- and colloidal metal oxide-contg. siloxane coatings with good adhesion to optical plastics)
IT **52004-97-4P**, 3-Methacryloxypropyltrimethoxysilane homopolymer
159338-14-4P, 3-Methacryloxypropyltrimethoxysilane homopolymer, sru
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(alkylphenol- and colloidal metal oxide-contg. siloxane coatings with good adhesion to optical plastics)
RN 52004-97-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2530-85-0
CMF C10 H20 O5 Si



RN 159338-14-4 HCAPLUS
CN Poly[[1,3-bis[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)



L61 ANSWER 7 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:100928 HCAPLUS
DN 134:168387
TI Biomedical compositions preparation of intraocular **lenses**
IN Clayton, Anthony Brian; Meijs, Gordon Francis
PA Commonwealth Scientific and Industrial Research Organisation, Australia
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001008603	A1	20010208	WO 2000-AU915	20000802
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1207816	A1	20020529	EP 2000-947678	20000802
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
PRAI	AU 1999-1978	A	19990802		
	WO 2000-AU915	W	20000802		

AB A method of prepg. intraocular **lenses** in situ is disclosed. The method involves the injection of an unsatd. alkyldimethylsiloxane macromonomer. The macromonomer is then polymd. to give a polymer having an E modulus in the range 0.5-5 kPa. An acyrlamidoorganosilicon macromer was prepd. by the reaction of aminopropylmethylsiloxane-dimethylsiloxane copolymer with 2-vinyl-4,4-dimethylazlactone. A soln. contg. acrylamide-functional siloxane 100, and Irgacure 651 photoinitiator 0.3 parts in chloroform was prepd. and placed into polypropylene mold and polymd. for ten min under UV lamp. A transparent, rubbery polymer disk was obtained with shear modulus of 220 kPa.

IC ICM A61F002-14
ICS A61F002-16; C08G077-38; C08G077-388
CC 63-7 (Pharmaceuticals)
ST biomedical intraocular **lens** polysiloxane polyacrylate
IT Polysiloxanes, biological studies
RL: DEV (Device component use); SPN (Synthetic preparation); THU

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(acrylic; biomedical compns. prepn. of intraocular **lenses**)

IT Intraocular **lenses**
Refractive index
Young's modulus
(biomedical compns. prepn. of intraocular **lenses**)

IT **324745-04-2P 324745-05-3P 324745-06-4P**
324745-07-5P
RL: DEV (Device component use); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(biomedical compns. prepn. of intraocular **lenses**)

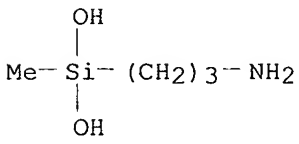
IT **324745-04-2P 324745-05-3P 324745-06-4P**
324745-07-5P
RL: DEV (Device component use); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(biomedical compns. prepn. of intraocular **lenses**)

RN 324745-04-2 HCAPLUS

CN 5(4H)-Oxazolone, 2-ethenyl-4,4-dimethyl-, polymer with (3-aminopropyl)methylsilanediol and dimethylsilanediol, graft (9CI) (CA INDEX NAME)

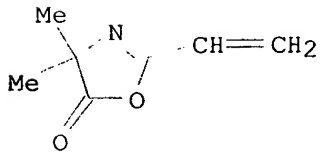
CM 1

CRN 158465-65-7
CMF C4 H13 N O2 Si



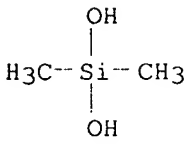
CM 2

CRN 29513-26-6
CMF C7 H9 N O2



CM 3

CRN 1066-42-8
CMF C2 H8 O2 Si



RN 324745-05-3 HCAPLUS
CN 5(4H)-Oxazolone, 2-ethenyl-4,4-dimethyl-, polymer with [3-[(2-aminoethyl)amino]propyl]methylsilanediol and dimethylsilanediol, graft (9CI) (CA INDEX NAME)

CM 1

CRN 83145-66-8
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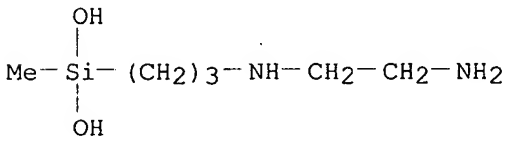
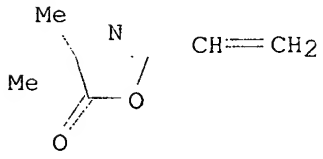


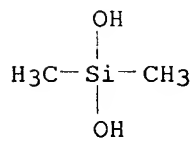
CM 2

CRN 29513-26-6
CMF C7 H9 N O2



CM 3

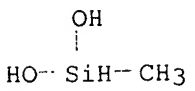
CRN 1066-42-8
CMF C2 H8 O2 Si



RN 324745-06-4 HCAPLUS
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with dimethylsilanediol and methylsilanediol, graft (9CI) (CA INDEX NAME)

CM 1

CRN 43641-90-3
CMF C H6 O2 Si



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CRN 1066-42-8
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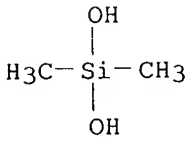
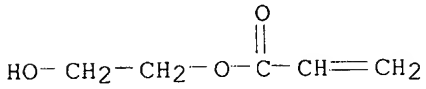


CM 3

CRN 818-61-1
CMF C5 H8 O3



RN 324745-07-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-propenyl ester, polymer with dimethylsilanediol and methylsilanediol, graft (9CI) (CA INDEX NAME)

CM 1

CRN 43641-90-3
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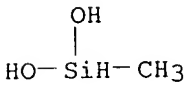

CM 2

CRN 1066-42-8
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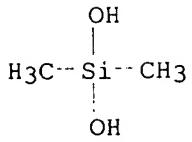

CM 3

CRN 96-05-9
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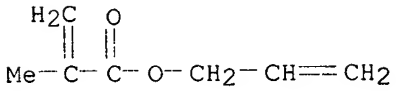


RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 8 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:716211 HCAPLUS
DN 131:323948
TI Titania-containing organic silicon polymer compositions for hard coatings on plastic **lenses** and their laminates with antireflection films
IN Miyashita, Kazunori; Takeshita, Katsuyoshi
PA Seiko Epson Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11310755	A2	19991109	JP 1998-117318	19980427

AB The compns. contain (A) org. Si compds. R1SiX13 (R1 = C.gtoreq.3 org. groups with polymerizable reactive group; X1 = hydrolyzable group), (B) inorg. oxide fine particles contg. rutile TiO2 with particle diam. 1-200 .mu.m, and optionally (C) org. Si compds. X23-mR2mSiYSiR3mX33-m (R2, R3 = C1-6 hydrocarbon; X2, X3 = hydrolyzable group; Y = org. group contg. carbonate or epoxy; m = 0, 1), (D) polyepoxides, and (E) org. Si compds. R4nSiX44-n (R4 = C1-3 hydrocarbon; X4 = hydrolyzable group; n = 0, 1). The laminates comprise (colored) coating of the compn. and inorg. antireflection films. The hard coatings have excellent weather (light) resistance while keeping high **refractive** index. Thus, 74.93 g (.gamma.-glycidoxypropyl)trimethoxysilane was allowed to react with 37.61 g vinyltrimethoxysilane in the presence of 0.1 N HCl soln., mixed with water 275.11, rutile TiO2-ZrO2-SiO2-SnO2 composite sol [Optolake 1120Z (11RU-7/A8)] 584.39, and silicone-type surfactant (L 7604) 0.30 g in this order, and stirred to give a hard coat liq., which was spin-coated onto both faces of a plastic **lense**, cured at 135.degree. resp., plasma-treated, and vapor-deposited with SiO2-ZrO to give laminates having excellent abrasion resistance, weather resistance, and layer adhesion.

IC ICM C09D183-04
ICS B32B009-00; C09D001-00; C09D163-00; G02B001-10
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 38

ST titania polysiloxane hard coating plastic **lense**; glycidoxypropyl methoxylsilane polymn hydrolysis hard coating; abrasion resistance coating titania polysiloxane **lense**; weather resistance coating titania polysiloxane **lense**; silica zirconia antireflection coating laminate **lense**; **eyeglass lense** hard coat organopolysiloxane titania

IT Coating materials
(abrasion- and weather-resistant; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT Polysiloxanes, uses
Polysiloxanes, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-epoxy; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT Epoxy resins, uses
Epoxy resins, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polysiloxane-; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT Epoxy resins, uses
Epoxy resins, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(epoxy-contg. polysiloxane-; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT Polysiloxanes, uses
Polysiloxanes, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(epoxy-contg.; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT Antireflective films
Eyeglass lenses
(titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT 170016-51-0
RL: TEM (Technical or engineered material use); USES (Uses)
(**lenses**; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT 1314-23-4, Zirconia, uses 7631-86-9, Silica, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(silica-zirconia antireflection film; titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT **164065-58-1P**, (.gamma.-Glycidoxypropyl)trimethoxysilane-vinyltrimethoxysilane copolymer **249505-84-8P**
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP**

(Preparation); USES (Uses)
(titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

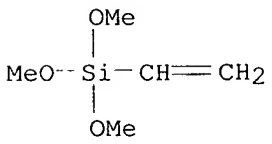
IT 249514-63-4, Optolake 1120Z11RU7A8
RL: TEM (Technical or engineered material use); USES (Uses)
(titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

IT **164065-58-1P**, (.gamma.-Glycidoxypropyl)trimethoxysilane-vinyltrimethoxysilane copolymer **249505-84-8P**
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(titania-contg. organopolysiloxane compns. for hard coatings on plastic **lenses** and their laminates with antireflection films)

RN 164065-58-1 HCAPLUS
CN Silane, ethenyltrimethoxy-, polymer with trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

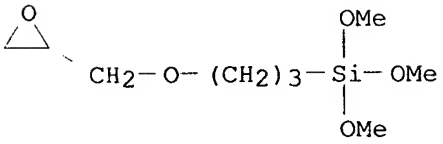
CM 1

CRN 2768-02-7
CMF C5 H12 O3 Si



CM 2

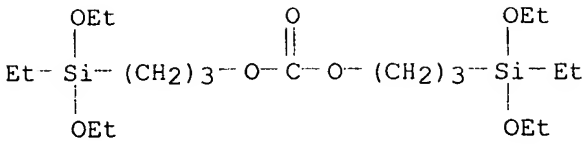
CRN 2530-83-8
CMF C9 H20 O5 Si



RN 249505-84-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with bis[3-(diethoxyethylsilyl)propyl] carbonate, 2-(dimethylamino)ethyl 2-methyl-2-propenoate, ethenyltrimethoxysilane, 2,2'-[1,6-hexanediylbis(oxymethylene)]bis[oxirane] and trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

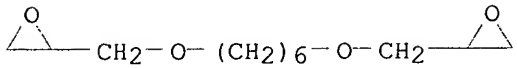
CM 1

CRN 225663-58-1
CMF C19 H42 O7 Si2



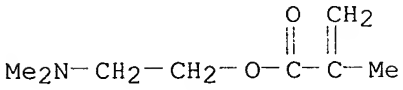
CM 2

CRN 16096-31-4
CMF C12 H22 O4



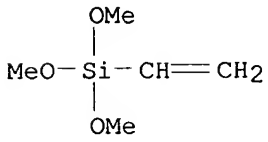
CM 3

CRN 2867-47-2
CMF C8 H15 N O2



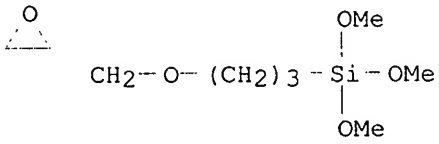
CM 4

CRN 2768-02-7
CMF C5 H12 O3 Si



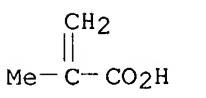
CM 5

CRN 2530-83-8
CMF C9 H20 O5 Si



CM 6

CRN 79-41-4
CMF C4 H6 O2



L61 ANSWER 9 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:490166 HCAPLUS
DN 131:163204
TI Antireflective transparent materials
IN Oka, Koichiro; Kurasaki, Shoichi; Nakakimura, Akitoshi; Kondo, Satoshi
PA Toray Industries, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11211901	A2	19990806	JP 1998-13004	19980126

OS MARPAT 131:163204
AB The materials comprises a substrate having (a) an elec. conductive hard coat film which may contain sol particles contg. Sn, In, or Sb and (b) a film having low **refractive** index which may contain cured product of a fluoropolymer acrylate or a glycidyl-terminated fluoropolymer. The material shows good antistatic property and high scratch resistance and is useful for a CRT, a liq. crystal display device, a window glass, an optical **lens**, etc.
IC ICM G02B001-11
ICS C08F020-22; C08G059-30; C09D005-00; C09D005-24; C09D133-16; C09D163-00; C09D201-00; G02B001-10; G09F009-00; H01J029-88; H01J029-89; B32B007-02
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38, 74
IT Polysiloxanes, properties
Polysiloxanes, properties
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(acrylic, fluorine-contg., low **refractive** index film; antireflective transparent materials having good antistatic property and scratch resistance)
IT Fluoropolymers, properties
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(acrylic, low **refractive** index film; antireflective transparent materials having good antistatic property and scratch resistance)
IT Fluoropolymers, properties
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(acrylic-polysiloxane-, low **refractive** index film; antireflective transparent materials having good antistatic property

and scratch resistance)

IT Cathode ray tubes
Lenses
Liquid crystal displays
Windows
(antireflective transparent materials having good antistatic property and scratch resistance)

IT Fluoropolymers, properties
Fluoropolymers, properties
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(epoxy, low **refractive** index film; antireflective transparent materials having good antistatic property and scratch resistance)

IT Epoxy resins, properties
Epoxy resins, properties
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)
(fluorine-contg., low **refractive** index film; antireflective transparent materials having good antistatic property and scratch resistance)

IT 190908-99-7P 236755-08-1P 236755-09-2P 236755-10-5P 236755-11-6P 236755-12-7P **236755-13-8P**
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); **PREP (Preparation)**; USES (Uses)
(low **refractive** index film; antireflective transparent materials having good antistatic property and scratch resistance)

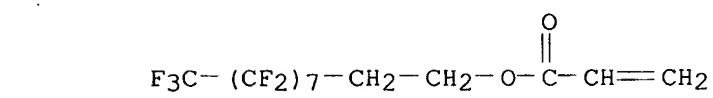
IT **236755-13-8P**
RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); **PREP (Preparation)**; USES (Uses)
(low **refractive** index film; antireflective transparent materials having good antistatic property and scratch resistance)

RN 236755-13-8 HCAPLUS

CN 2-Propenoic acid, 2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate and 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX NAME)

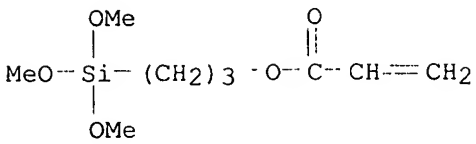
CM 1

CRN 27905-45-9
CMF C13 H7 F17 O2



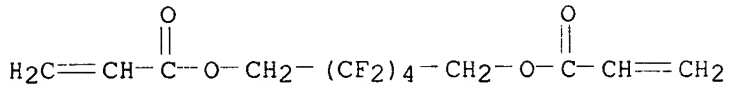
CM 2

CRN 4369-14-6
CMF C9 H18 O5 Si



CM 3

CRN 2264-01-9
CMF C12 H10 F8 O4



L61 ANSWER 10 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:322502 HCAPLUS
DN 131:25606
TI Transparent resin materials with good antifouling property and surface wettability for **lenses**
IN Hiratani, Haruyuki; Kawakuchi, Toru
PA Menicon Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11133201	A2	19990521	JP 1997-297269	19971029

AB The materials comprise polymers prepd. from itaconic acid derivs. H2C:C(CO2R1)CH2CO2R2R3 [R1 = H, SiMe3; R2 = C1-5 alkylene; R3 = SiMen(OSiMe3)3-n]. Thus, a specimen comprising 10:46:54:6:1 (%) .beta.-trimethylsilylpropyl itaconate-tris(trimethylsiloxy)silylstyrene-2,2,2,2',2',2'-hexafluoroisopropyl methacrylate-4-vinylbenzyl methacrylate-ethylene glycol dimethacrylate copolymer showed O permeability (DK0.2) 128 mLcm2/mLsmmHg, contact angle 128.degree., and n 73.
IC ICM G02B001-04
ICS A61L027-00; C08F030-08; C09K003-00; G02C007-04; C08F290-06
CC 73-12 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38
ST transparent itaconic acid deriv resin **lens**; methylsilylpropyl itaconate transparent impact resistant resin; methacrylic antifouling resin oxygen permeable **lens**
IT Transparent materials
Transparent materials
(impact-resistant; transparent resin materials with good antifouling property and surface wettability for **lenses**)
IT Contact angle
Contact **lenses**
Hydrogels

Lenses
Refractive index
(transparent resin materials with good antifouling property and surface wettability for **lenses**)

IT Impact-resistant materials
Impact-resistant materials
(transparent; transparent resin materials with good antifouling property and surface wettability for **lenses**)

IT **226234-52-2P 226234-54-4P 226234-57-7P**
226234-59-9P **226234-61-3P 226234-63-5P**
RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(transparent resin materials with good antifouling property and surface wettability for **lenses**)

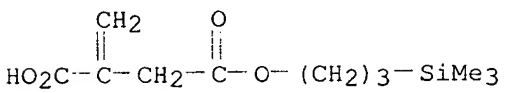
IT **226234-52-2P 226234-54-4P 226234-57-7P**
226234-61-3P 226234-63-5P
RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(transparent resin materials with good antifouling property and surface wettability for **lenses**)

RN 226234-52-2 HCAPLUS

CN Butanedioic acid, methylene-, 4-[3-(trimethylsilyl)propyl] ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 3-(4-ethenylphenyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, (4-ethenylphenyl)methyl 2-methyl-2-propenoate and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

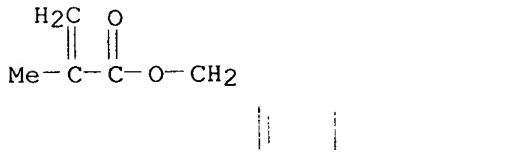
CM 1

CRN 226234-51-1
CMF C11 H20 O4 Si



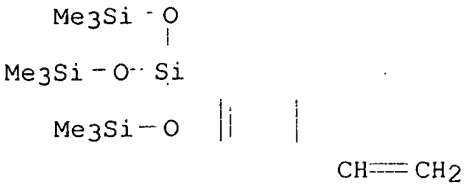
CM 2

CRN 99413-45-3
CMF C13 H14 O2



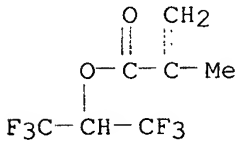
CM 3

CRN 18547-54-1
CMF C17 H34 O3 Si4



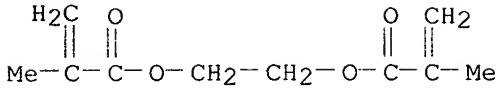
CM 4

CRN 3063-94-3
CMF C7 H6 F6 O2



CM 5

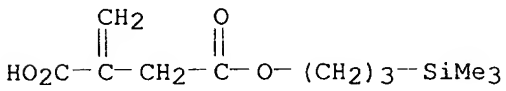
CRN 97-90-5
CMF C10 H14 O4



RN 226234-54-4 HCAPLUS
CN Butanedioic acid, methylene-, 4-[3-(trimethylsilyl)propyl] ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 3-(4-ethenylphenyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, (4-ethenylphenyl)methyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone, 2-methyl-2-propenoic acid and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

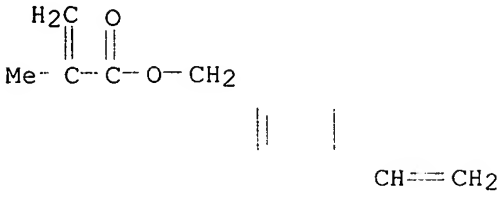
CM 1

CRN 226234-51-1
CMF C11 H20 O4 Si



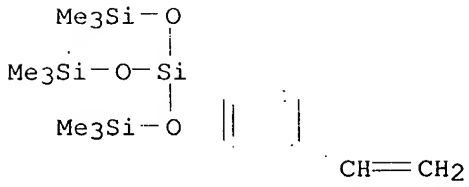
CM 2

CRN 99413-45-3
CMF C13 H14 O2



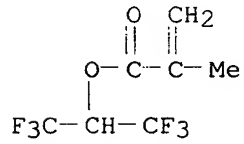
CM 3

CRN 18547-54-1
CMF C17 H34 O3 Si4



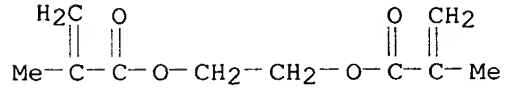
CM 4

CRN 3063-94-3
CMF C7 H6 F6 O2



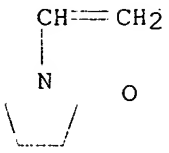
CM 5

CRN 97-90-5
CMF C10 H14 O4



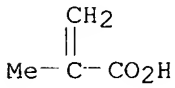
CM 6

CRN 88-12-0
CMF C6 H9 N O



CM 7

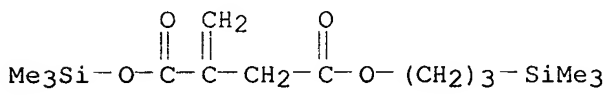
CRN 79-41-4
CMF C4 H6 O2



RN 226234-57-7 HCAPLUS
CN Butanedioic acid, methylene-, 1-(trimethylsilyl) 4-[3-(trimethylsilyl)propyl] ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 3-(4-ethenylphenyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, (4-ethenylphenyl)methyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone, 2-methyl-2-propenoic acid and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

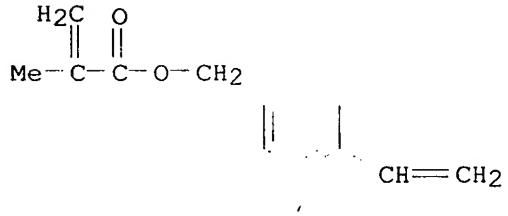
CM 1

CRN 226234-56-6
CMF C14 H28 O4 Si2



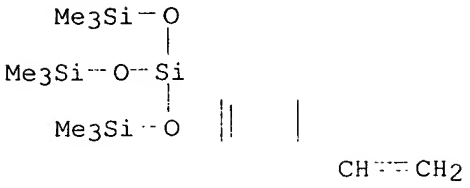
CM 2

CRN 99413-45-3
CMF C13 H14 O2



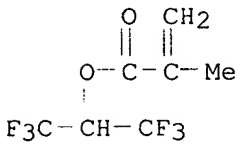
CM 3

CRN 18547-54-1
CMF C17 H34 O3 Si4



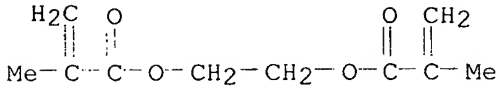
CM 4

CRN 3063-94-3
CMF C7 H6 F6 O2



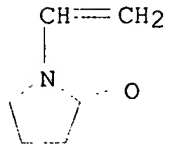
CM 5

CRN 97-90-5
CMF C10 H14 O4



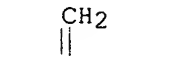
CM 6

CRN 88-12-0
CMF C6 H9 N O



CM 7

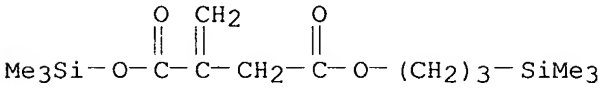
CRN 79-41-4
CMF C4 H6 O2



RN 226234-61-3 HCAPLUS
CN Butanedioic acid, methylene-, 1-(trimethylsilyl) 4-[3-(trimethylsilyl)propyl] ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

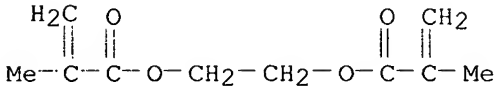
CM 1

CRN 226234-56-6
CMF C14 H28 O4 Si2



CM 2

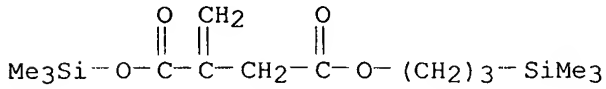
CRN 97-90-5
CMF C10 H14 O4



RN 226234-63-5 HCAPLUS
CN Butanedioic acid, methylene-, 1-(trimethylsilyl) 4-[3-(trimethylsilyl)propyl] ester, polymer with N,N-dimethyl-2-propenamide, 1,2-ethanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

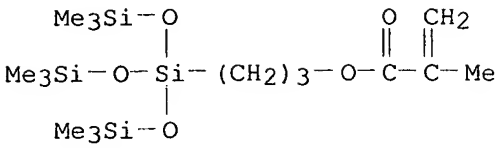
CM 1

CRN 226234-56-6
CMF C14 H28 O4 Si2



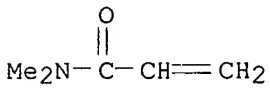
CM 2

CRN 17096-07-0
CMF C16 H38 O5 Si4



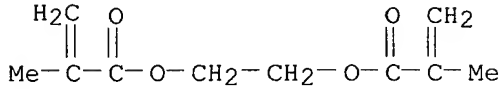
CM 3

CRN 2680-03-7
CMF C5 H9 N O



CM 4

CRN 97-90-5
CMF C10 H14 O4



L61 ANSWER 11 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:297250 HCAPLUS
DN 130:343051
TI Crosslinkable sulfone compound and an optical polymeric material employing it
IN Hiratani, Haruyuki
PA Menicon Co., Ltd., Japan
SO Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 913713	A2	19990506	EP 1998-120257	19981026
	EP 913713	A3	20000712		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 11130744	A2	19990518	JP 1997-297268	19971029
	US 6015874	A	20000118	US 1998-178427	19981026
PRAI	JP 1997-297268	A	19971029		

OS MARPAT 130:343051
AB A novel crosslinkable sulfone compd. with two polymerizable unsatd. double bonds and an optical polymeric material prepd. by employing such a crosslinkable compd. are described. The polymeric material obtained is excellent in hydrophilicity, transparency, UV light absorbing property, deposit resistance and boiling resistance and yet has proper hardness and

oxygen permeability. A crosslinkable compd., bis[4-(3-methacrylamidophenoxy)phenyl]sulfone, was prepd. from bis[4-(3-aminophenoxy)phenyl]sulfone and methacrylic acid chloride and then copolymd. with MMA and tris(trimethylsiloxy)silylpropyl methacrylate to obtain an oxygen-permeable hard optical material with small contact angle and improved hydrophilic property and a high **refractive** index and an UV light absorbing property.

IC ICM G02B001-04

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 38, 73

ST crosslinkable sulfone optical polymer; contact intraocular **lens** crosslinkable sulfone polymer

IT Intraocular **lenses**
(crosslinkable compd. and an optical material employing it)

IT Contact **lenses**
(hard, oxygen-permeable, UV light-absorbing; crosslinkable compd. and an optical material employing it)

IT Contact **lenses**
(soft; crosslinkable compd. and an optical material employing it)

IT **224425-07-4P**
RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(crosslinkable compd. and an optical material employing it)

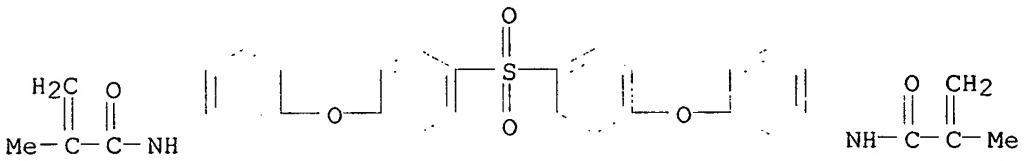
IT **224425-07-4P**
RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(crosslinkable compd. and an optical material employing it)

RN 224425-07-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with N,N'-[sulfonylbis(4,1-phenyleneoxy-3,1-phenylene)]bis[2-methyl-2-propenamide] and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

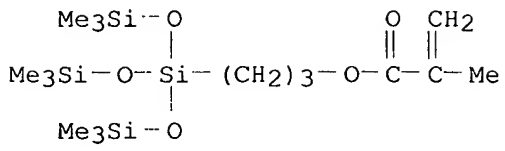
CM 1

CRN 224425-04-1
CMF C32 H28 N2 O6 S



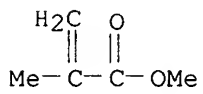
CM 2

CRN 17096-07-0
CMF C16 H38 O5 Si4



CM 3

CRN 80-62-6
CMF C5 H8 O2



L61 ANSWER 12 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:206971 HCAPLUS
DN 130:283120
TI Acrylic polymer optical materials having highly hydrophilic surfaces and lipid-staining resistance
IN Hiratani, Haruyuki
PA Menicon Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11080274	A2	19990326	JP 1997-248426	19970912

AB The optical materials, which are useful for contact **lenses**, are obtained by polymn. of monomers contg. ACONHCH(CO2R1)CH2CH2SMe (A = CH2:CR2, CH2:CHC6H4R3, CH2CR4CO2R5OCOC6H3(CO2R6), CH2C(CO2R7)CH2, cis-R8O2CCH:CH, trans-R9O2CCH:CH; R1 = H, C1-3 alkyl, Me3Si; R2, R4 = H, Me; R3 = none, C1-3 alkylene; R5 = C1-5 alkylene; R6-8 = C1-3 alkyl). Thus, methionine Me ester methacrylate 10, tris(trimethylsiloxy)silylpropyl methacrylate 48, 2,2,2,2',2',2'-hexafluoroisopropyl methacrylate 54, and ethylene glycol dimethacrylate 1 part were polymd. at 35-120.degree. for 64 h in the presence of 0.1 part 2,2'-azobis(2,4-dimethylvaleronitrile) to give a transparent polymer with O permeation coeff. 92 mL-cm2/cm3-s-mmHg, moisture absorption 0.12%, contact angle 69.degree., and **refractive** index -1.434.

IC ICM C08F220-56
ICS A61L027-00; C08F008-06; C08F212-14; C08F220-26; C08F222-38; C08F230-08; G02B001-04; G02C007-02; G02C007-04

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 63, 73

ST acrylic polymer optical material contact **lense**; methionine methyl ester methacrylate optical polymer; hydrophilic surface optical material acrylic polymer; lipid staining resistance optical acrylic polymer

IT Contact **lenses**
Optical materials
Transparent materials

(acrylic polymer optical materials having highly hydrophilic surfaces and lipid-staining resistance)

IT **222625-63-0P**, Ethylene glycol dimethacrylate-2,2,2,2',2',2'-hexafluoroisopropyl methacrylate-methionine methyl ester methacrylate-tris(trimethylsiloxy)silylpropyl methacrylate-4-vinylbenzyl methacrylate copolymer **222625-65-2P 222625-66-3P 222634-47-1P 222634-49-3P**
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(acrylic polymer optical materials having highly hydrophilic surfaces and lipid-staining resistance)

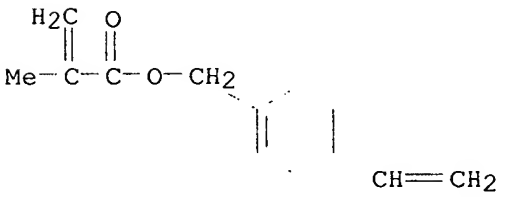
IT **222625-63-0P**, Ethylene glycol dimethacrylate-2,2,2,2',2',2'-hexafluoroisopropyl methacrylate-methionine methyl ester methacrylate-tris(trimethylsiloxy)silylpropyl methacrylate-4-vinylbenzyl methacrylate copolymer **222625-65-2P 222625-66-3P 222634-47-1P 222634-49-3P**
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(acrylic polymer optical materials having highly hydrophilic surfaces and lipid-staining resistance)

RN 222625-63-0 HCAPLUS

CN L-Methionine, N-(2-methyl-1-oxo-2-propenyl)-, methyl ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), (4-ethenylphenyl)methyl 2-methyl-2-propenoate, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

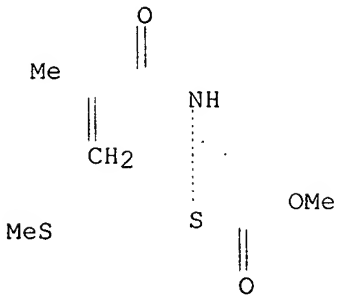
CRN 99413-45-3
CMF C13 H14 O2



CM 2

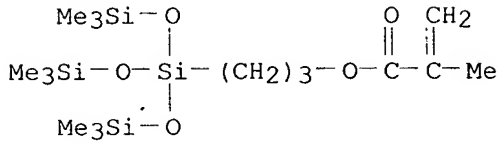
CRN 45159-22-6
CMF C10 H17 N O3 S

Absolute stereochemistry. Rotation (+).



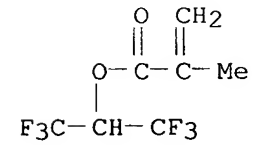
CM 3

CRN 17096-07-0
CMF C16 H38 O5 Si4



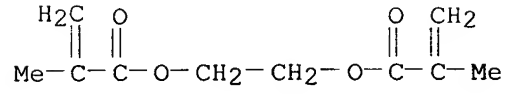
CM 4

CRN 3063-94-3
CMF C7 H6 F6 O2



CM 5

CRN 97-90-5
CMF C10 H14 O4



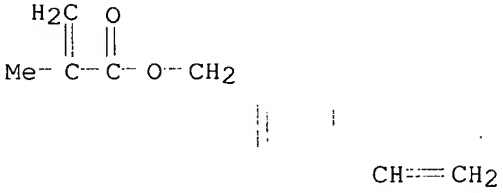
RN 222625-65-2 HCAPLUS
CN L-Methionine, N-(2-methyl-1-oxo-2-propenyl)-, methyl ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), (4-ethenylphenyl)methyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone, 2-methyl-2-propenoic acid, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

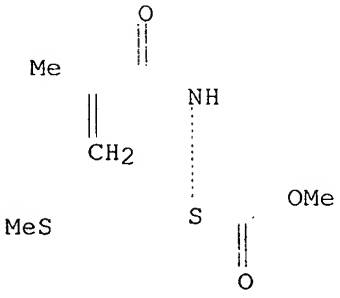
CRN 99413-45-3
CMF C13 H14 O2



CM 2

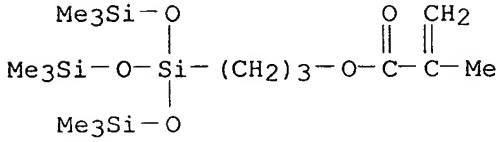
CRN 45159-22-6
CMF C10 H17 N O3 S

Absolute stereochemistry. Rotation (+).



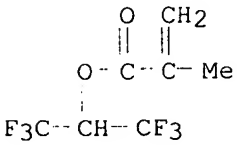
CM 3

CRN 17096-07-0
CMF C16 H38 O5 Si4



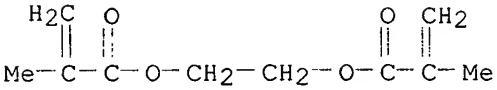
CM 4

CRN 3063-94-3
CMF C7 H6 F6 O2



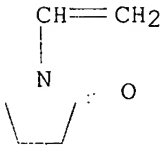
CM 5

CRN 97-90-5
CMF C10 H14 O4



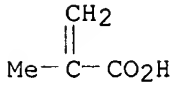
CM 6

CRN 88-12-0
CMF C6 H9 N O



CM 7

CRN 79-41-4
CMF C4 H6 O2

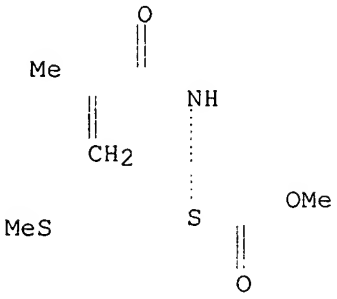


RN 222625-66-3 HCAPLUS
CN L-Methionine, N-(2-methyl-1-oxo-2-propenyl)-, methyl ester, polymer with N,N-dimethyl-2-propenamide, 1,2-ethanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

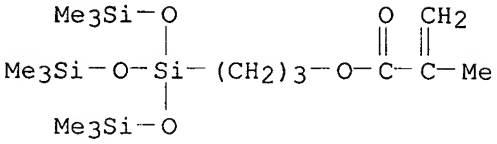
CRN 45159-22-6
CMF C10 H17 N O3 S

Absolute stereochemistry. Rotation (+).



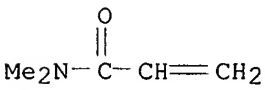
CM 2

CRN 17096-07-0
CMF C16 H38 O5 Si4



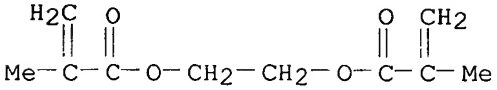
CM 3

CRN 2680-03-7
CMF C5 H9 N O



CM 4

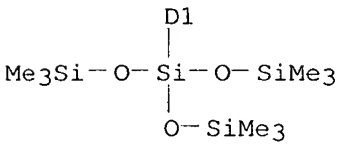
CRN 97-90-5
CMF C10 H14 O4



RN 222634-47-1 HCAPLUS
CN L-Methionine, N-(2-methyl-1-oxo-2-propenyl)-, methyl ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 3-(ethenylphenyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, (4-ethenylphenyl)methyl 2-methyl-2-propenoate and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

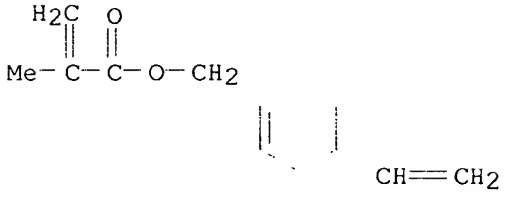
CM 1

CRN 129735-06-4
CMF C17 H34 O3 Si4
CCI IDS



CM 2

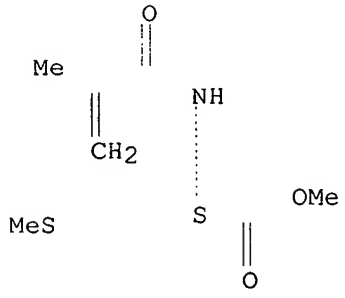
CRN 99413-45-3
CMF C13 H14 O2



CM 3

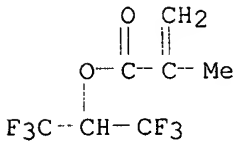
CRN 45159-22-6
CMF C10 H17 N O3 S

Absolute stereochemistry. Rotation (+).



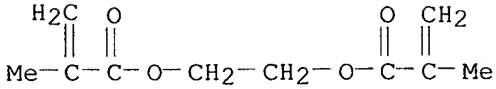
CM 4

CRN 3063-94-3
CMF C7 H6 F6 O2



CM 5

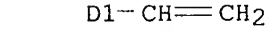
CRN 97-90-5
CMF C10 H14 O4

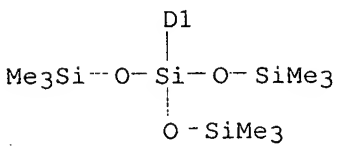


RN 222634-49-3 HCAPLUS
CN L-Methionine, N-(2-methyl-1-oxo-2-propenyl)-, methyl ester, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 3-(ethenylphenyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, (4-ethenylphenyl)methyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone, 2-methyl-2-propenoic acid and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

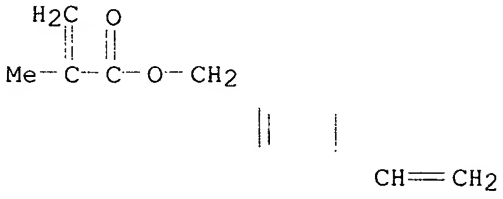
CRN 129735-06-4
CMF C17 H34 O3 Si4
CCI IDS





CM 2

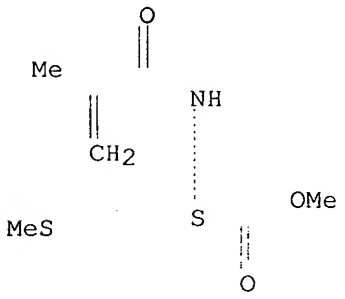
CRN 99413-45-3
CMF C13 H14 O2



CM 3

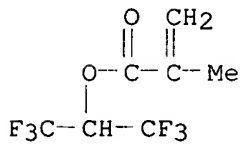
CRN 45159-22-6
CMF C10 H17 N O3 S

Absolute stereochemistry. Rotation (+).



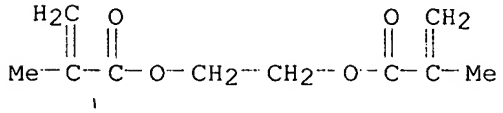
CM 4

CRN 3063-94-3
CMF C7 H6 F6 O2



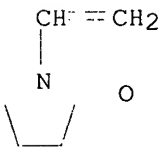
CM 5

CRN 97-90-5
CMF C10 H14 O4



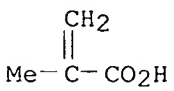
CM 6

CRN 88-12-0
CMF C6 H9 N O



CM 7

CRN 79-41-4
CMF C4 H6 O2



L61 ANSWER 13 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:99281 HCAPLUS
DN 130:240823
TI **Refractive** microlens fabrication by ink-jet process
AU Biehl, S.; Danzebrink, R.; Oliveira, P.; Aegerter, M. A.
CS Institut fur Neue Materialien-INM, Department of Coating Technology, Saarbrucken, D-66123, Germany
SO Journal of Sol-Gel Science and Technology (1998), 13(1/2/3), 177-182
CODEN: JSGTEC; ISSN: 0928-0707
PB Kluwer Academic Publishers
DT Journal
LA English
AB Microlenses made of hybrid org.-inorg. materials have been fabricated on glass substrates using a com. drop-on-demand ink-jet printing system with a 50 .mu.m diam. nozzle driven by a piezoelec. device and using an org.-inorg. sol. Hybrid org.-inorg. sols have been prepd. by hydrolysis of methacryloxypropyltrimethoxysilane (MPTS) mixed with an ethanolic soln. of tetraethyleneglycoldimethacrylate (TEGDMA) and 1 to 10 wt.% UV photoinitiator (Irgacure 184). After deposition the drops were polymd. by UV light irradn. The polymn. of the sols during the UV irradn. was followed by Fourier transform IR spectroscopy, particularly analyzing the C=C bonds band at 1636 cm-1. The visible near-IR optical transmission of the sol and polymd. material were detd. The polymd. sols are transparent from 375 to 2700 nm and have a **refractive** index n = 1.5. Viscosity, solvent evapn., drop-substrate wetting condition and drop and substrate temps. are the main parameters which govern the prodn. of reproducible **lens** shapes. The shape and surface roughness of the **lenses** have been characterized by at. force microscopy and profilometry. Their optical properties were detd. by light microscopy and spectrophotometric techniques. The printing technique can produce plano-convex spherical microlenses with diams. varying from 50 to 300 .mu.m, focal lengths from 70 .mu.m to 3 mm and f-nos. as low as 0.6. The

fabrication of one and two dimensional closely spaced microlens arrays should be possible.

CC 57-1 (Ceramics)
Section cross-reference(s): 38, 73

ST acrylic siloxane hybrid microlens ink jet printing photopolymn; **refractive** microlens inorg org hybrid ink jet printing photopolymn

IT Hybrid organic-inorganic materials
(acrylic polysiloxane; **refractive** microlens fabrication by ink-jet printing from photopolymerizable hybrid org.-inorg. sols)

IT Polysiloxanes, preparation
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(acrylic, **lenses**; **refractive** microlens fabrication by ink-jet printing from photopolymerizable hybrid org.-inorg. sols)

IT Inks
(photocurable, acrylic polysiloxane; **refractive** microlens fabrication by ink-jet printing from photopolymerizable hybrid org.-inorg. sols)

IT Polymerization
(photopolymn.; **refractive** microlens fabrication by ink-jet printing from photopolymerizable hybrid org.-inorg. sols)

IT Glass substrates
Hydrolysis
Ink-jet printing
Microlenses
Refractive index
Surface roughness
(**refractive** microlens fabrication by ink-jet printing from photopolymerizable hybrid org.-inorg. sols)

IT **188784-13-6P**
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; PROC (Process); USES (Uses)
(microlens; **refractive** microlens fabrication by ink-jet printing from photopolymerizable hybrid org.-inorg. sols)

IT 947-19-3, Irgacure 184
RL: MOA (Modifier or additive use); USES (Uses)
(photoinitiator; **refractive** microlens fabrication by ink-jet printing from photopolymerizable hybrid org.-inorg. sols)

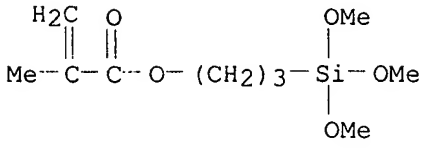
IT **188784-13-6P**
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; PROC (Process); USES (Uses)
(microlens; **refractive** microlens fabrication by ink-jet printing from photopolymerizable hybrid org.-inorg. sols)

RN 188784-13-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxybis(2,1-ethanediyloxy-2,1-ethanediyl) ester, polymer with 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

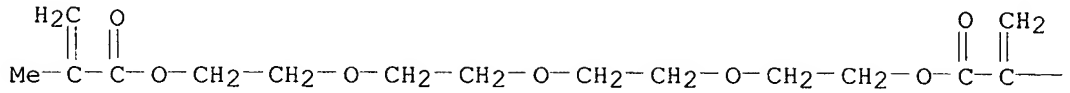
CRN 2530-85-0
CMF C10 H20 O5 Si



CM 2

CRN 109-17-1
CMF C16 H26 O7

PAGE 1-A



PAGE 1-B

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RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 14 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:784736 HCAPLUS
DN 130:111206
TI Systematic approach to the synthesis of organic-inorganic nanocomposites based on DMTA measurements and IR spectroscopy
AU Muller, Peter; Becker, Carsten; Schmidt, Helmut
CS Institut fuer Neue Materialien, Saarbruecken, D-66123, Germany
SO Materials Research Society Symposium Proceedings (1998), 519(Organic/Inorganic Hybrid Materials), 387-393
CODEN: MRSPDH; ISSN: 0272-9172
PB Materials Research Society
DT Journal
LA English
AB Sol-gel derived org.-inorg. hybrid materials with potential fields of application as **refractive** optical components for example laser diode bars and **ophthalmic lenses** are presented. The main components of the hybrid materials under investigation are precondensed methacryloxypropyltrimethoxysilane (MPTS, denoted: M) with an organically polymerizable methacrylic functionality and tetraethylene glycol dimethacrylate (TEGDMA, denoted: T) as crosslinking org. monomer with two polymerizable double bonds. The molar ratios of the components ranged from M/T 10/90 up to M/T 70/30. The polymer derived from pure TEGDMA (M/T 0/100) served as a ref. material. In addn. to this nanoscaled TiO2 particles (5 wt.% and 10 wt.%) were incorporated in the org.-inorg. M/T 30/70 matrix to increase the **refractive** index of the resulting nanocomposites. For the prepn. of the different systems, precondensed MPTS was mixed with TEGDMA, the nanoparticulate titania sol

(when used), an appropriate photoinitiator and a thermoinitiator. The reaction mixts. were polymd. photochem. and/or thermally. The propagation of the free radical polymn. reaction after photopolymn. and subsequent thermal curing was followed by IR-spectroscopy, showing that the degree of double bond conversion is strongly increased by the thermal curing step. Incorporation of increasing amts. of TiO2 nanoparticles resulted in redn. of the double bond conversion compared to the corresponding unfilled system. The homogeneous dispersion of the titania particles in the completely cured M/T 30/70 matrix could be manifested by high resoln. transmission electron microscopy (HTEM). The thermomech. properties of the completely cured nanocomposites were monitored by dynamic mech. thermal anal. (DMTA) showing a strong dependence on compn.

CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 37, 63, 73

IT **188784-13-6P**, .gamma.-Methacryloxypropyltrimethoxysilane-tetraethylene glycol dimethacrylate copolymer
RL: PRP (Properties); **SPN (Synthetic preparation); PREP (Preparation)**
(systematic approach to synthesis of org.-inorg. nanocomposites based on DMTA measurements and IR spectroscopy)

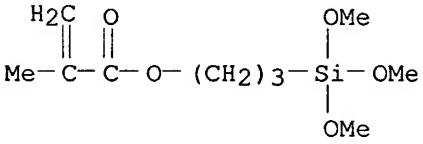
IT **188784-13-6P**, .gamma.-Methacryloxypropyltrimethoxysilane-tetraethylene glycol dimethacrylate copolymer
RL: PRP (Properties); **SPN (Synthetic preparation); PREP (Preparation)**
(systematic approach to synthesis of org.-inorg. nanocomposites based on DMTA measurements and IR spectroscopy)

RN 188784-13-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxybis(2,1-ethanediyloxy-2,1-ethanediyl) ester, polymer with 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

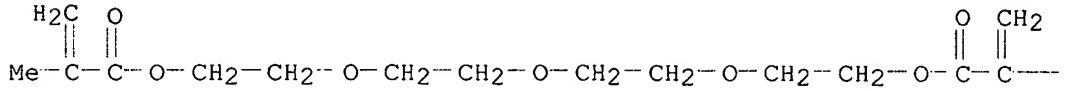
CRN 2530-85-0
CMF C10 H20 O5 Si



CM 2

CRN 109-17-1
CMF C16 H26 O7

PAGE 1-A



PAGE 1-B

--- Me

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 15 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:612143 HCAPLUS
DN 129:232082
TI UV-curable transparent epoxy-containing polysiloxane coating compositions having index **refraction** matched to substrates and good abrasion resistance and tintability
IN Treadway, Gerald D.
PA The Walman Optical Company, USA
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9839390	A1	19980911	WO 1998-US4845	19980306
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 6100313	A	20000808	US 1997-813559	19970307
	AU 9865517	A1	19980922	AU 1998-65517	19980306
PRAI	US 1997-813559	A	19970307		
	WO 1998-US4845	W	19980306		

AB The volatile-free coating compn., useful for **eyeglass lenses** or other transparent substrates, comprises (a) a binder component contg. a polymerizable hydrolyzed epoxy-functional alkoxy silane precursor, a polymerizable ether (e.g., glycidyl ether), an ethylenically unsatd. monomer (e.g., acrylic monomer having acrylic functionality .ltoreq.2), and (b) a curing agent component contg. a cationic photoinitiator and a free radical photoinitiator. Thus, 25.35 parts partially hydrolyzed .gamma.-glycidoxypropyltrimethoxysilane was mixed with butanediol diacrylate 23.47, trimethylolpropane triglycidyl ether 37.55, UVI 6974 (triarylsulfonium photoinitiator) 9.39, Darocure 1173 (2-hydroxy-2-methyl-1-phenylpropane-1-one) 2.35, Ebecryl 1360 (acrylated silicone flow control agent) 1.89 parts, spin coated onto a polycarbonate substrate and cured using 300 W/in-mercury bulb, showing scratch resistance <1% haze, tintability <10% transmission and adhesion after tint 100%.

IC ICM C09D004-00
ICS C08F216-00; C08F222-10; C08G059-30; C08G059-32
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 73
ST epoxy polysiloxane coating transparency **eyeglass lenses** ; abrasion resistance acrylic epoxy polysiloxane coating; photocurable

glycidyl ether acrylic siloxane coating; glycidoxypropyltrimethoxysilane butanediol diacrylate copolymer photoinitiating; trimethylolpropane triglycidyl ether copolymer photoinitiating

IT **Eyeglass lenses**
(UV-curable transparent epoxy-contg. polysiloxane coating compns. having index **refraction** matched to substrates and good abrasion resistance and tintability for)

IT Coating materials
Coating materials
(abrasion-resistant, UV-curable; UV-curable transparent epoxy-contg. polysiloxane coating compns. having index **refraction** matched to substrates and good abrasion resistance and tintability)

IT Polysiloxanes, uses
Polysiloxanes, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-epoxy; UV-curable transparent epoxy-contg. polysiloxane coating compns. having index **refraction** matched to substrates and good abrasion resistance and tintability for)

IT Epoxy resins, uses
Epoxy resins, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polysiloxane-; UV-curable transparent epoxy-contg. polysiloxane coating compns. having index **refraction** matched to substrates and good abrasion resistance and tintability for)

IT **212850-24-3P 212850-25-4P 212850-26-5P**
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(UV-curable transparent epoxy-contg. polysiloxane coating compns. having index **refraction** matched to substrates and good abrasion resistance and tintability)

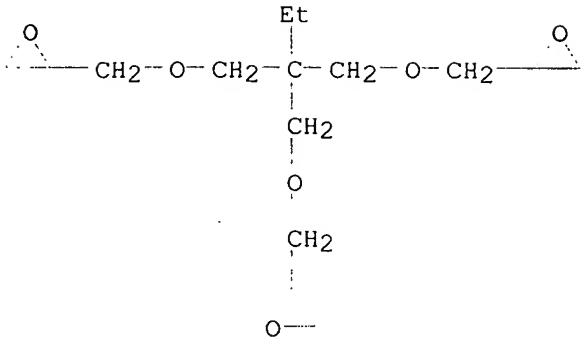
IT **212850-24-3P 212850-25-4P 212850-26-5P**
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(UV-curable transparent epoxy-contg. polysiloxane coating compns. having index **refraction** matched to substrates and good abrasion resistance and tintability)

RN 212850-24-3 HCAPLUS

CN 2-Propenoic acid, 1,4-butanediyl ester, polymer with 2,2'-[[2-ethyl-2-[(oxiranylmethoxy)methyl]-1,3-propanediyl]bis(oxymethylene)]bis[oxirane] and trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

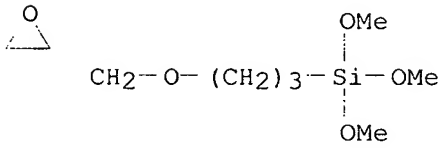
CM 1

CRN 3454-29-3
CMF C15 H26 O6



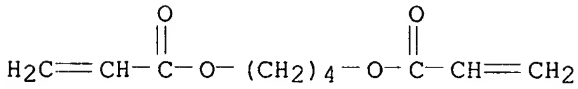
CM 2

CRN 2530-83-8
CMF C9 H20 O5 Si



CM 3

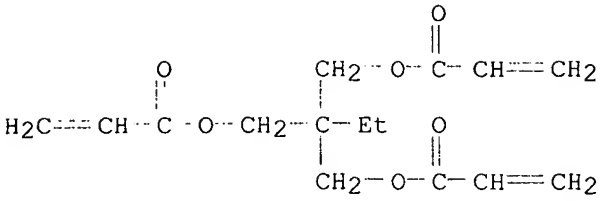
CRN 1070-70-8
CMF C10 H14 O4



RN 212850-25-4 HCAPLUS
CN 2-Propenoic acid, 1,4-butanediyl ester, polymer with 2,2'-[[2-ethyl-2-[(oxiranylmethoxy)methyl]-1,3-propanediyl]bis(oxymethylene)]bis[oxirane], 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

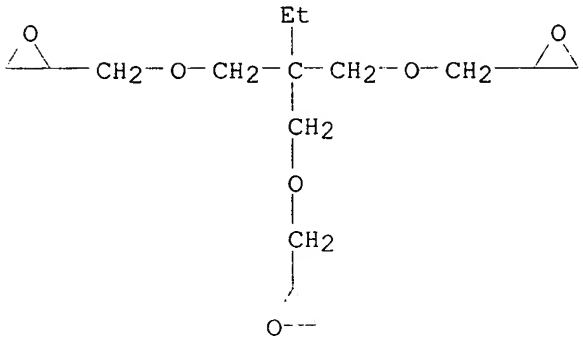
CM 1

CRN 15625-89-5
CMF C15 H20 O6



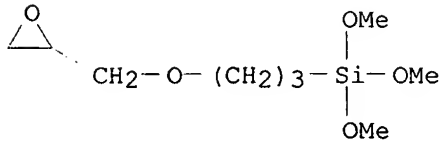
CM 2

CRN 3454-29-3
CMF C15 H26 O6



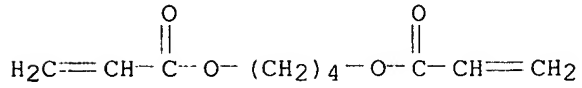
CM 3

CRN 2530-83-8
CMF C9 H20 O5 Si



CM 4

CRN 1070-70-8
CMF C10 H14 O4

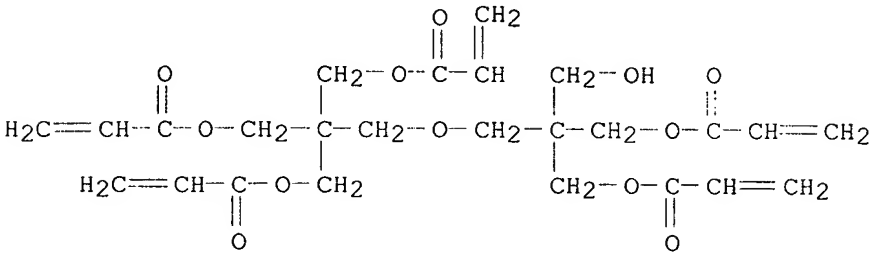


RN 212850-26-5 HCAPLUS
CN 2-Propenoic acid, 1,4-butanediyl ester, polymer with 1,4-bis[(ethenyloxy)methyl]cyclohexane, 2-[[3-hydroxy-2,2-bis[[(1-oxo-2-

propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

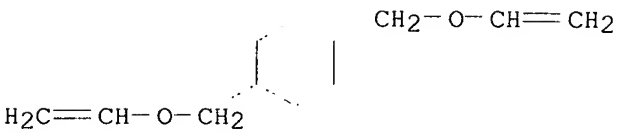
CM 1

CRN 60506-81-2
CMF C25 H32 O12



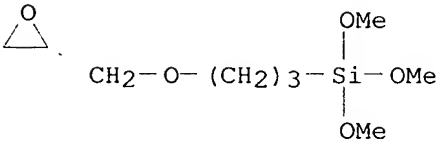
CM 2

CRN 17351-75-6
CMF C12 H20 O2



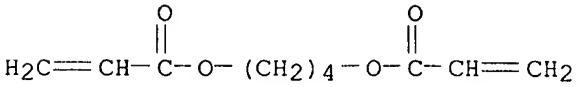
CM 3

CRN 2530-83-8
CMF C9 H20 O5 Si



CM 4

CRN 1070-70-8
CMF C10 H14 O4



RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 16 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:344416 HCAPLUS
DN 129:19734
TI Ocular **lens** material with good surface wettability, transparency, and high **refractive** index
IN Hiratani, Haruyuki
PA Menicon Co., Ltd., Japan
SO Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 843184	A2	19980520	EP 1997-119373	19971105
	EP 843184	A3	19990107		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 10148797	A2	19980602	JP 1996-306482	19961118
PRAI	JP 1996-306482		19961118		

AB The title ocular **lens** material is made from polymers obtained by polymg. polymerizable components contg. a monomer CH2=CH(R1)CO2(CH2)nOCOX (I; R1 = H, Me, CH2=CHC4H4-; n = 1-5; and X = carboxyphenyl, dicarboxyphenyl, carboxynaphthalenyl, or carboxycyclohexyl). Use of the above monomer enables manuf. of ocular **lens** material with excellent surface wettability and transparency, high **refractive** index, and a relatively high hardness. The materials are useful for contact **lenses**, intraocular **lenses**, or artificial corneas. Thus, 2-hydroxyethyl methacrylate monophthalate ester, I (where R1 = Me, n = 2, and X = 2-carboxyphenyl), was polymd. with Me methacrylate and ethylene glycol dimethacrylate to give a transparent ocular **lens** material having **refractive** index 1.525, contact angle <20.degree. and Shore D hardness 95. The material had higher **refractive** index, small contact angles, and hardness equal to or greater than ocular **lens** material prepd. from a Me methacrylate-ethylene glycol dimethacrylate copolymer.

IC ICM G02B001-04
ICS C08F220-26; C08F246-00
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 38, 73
ST ocular **lens** material transparent high **refractive**; methacrylate polymer ocular **lens**; wettable transparent ocular **lens** polymer
IT **Eye**
(artificial cornea; transparent ocular **lens** material with good surface wettability, high **refractive** index, and good hardness)
IT **Lenses**
(ocular; transparent ocular **lens** material with good surface wettability, high **refractive** index, and good hardness)
IT Contact **lenses**
Intraocular **lenses**
(transparent ocular **lens** material with good surface wettability, high **refractive** index, and good hardness)
IT Acrylic polymers, biological studies
RL: IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use);

BIOL (Biological study); PREP (Preparation); USES (Uses)
(transparent ocular **lens** material with good surface wettability, high **refractive** index, and good hardness)

IT 207730-91-4P 207730-92-5P **207800-27-9P**
RL: **IMF (Industrial manufacture)**; PRP (Properties); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(transparent ocular **lens** material with good surface wettability, high **refractive** index, and good hardness)

IT **207800-27-9P**
RL: **IMF (Industrial manufacture)**; PRP (Properties); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(transparent ocular **lens** material with good surface wettability, high **refractive** index, and good hardness)

RN 207800-27-9 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, mono[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with [(ethenylbenzenetriyl)tris(oxy)]tris[trimethylsilane], (ethenylphenyl)methyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

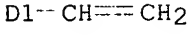
CRN 207800-26-8
CMF C17 H32 O3 Si3
CCI IDS

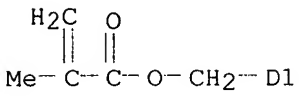
1/3 [D1—CH═CH2]

Me3Si—O—D1

CM 2

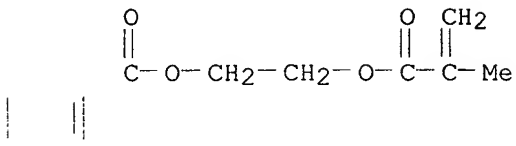
CRN 114573-55-6
CMF C13 H14 O2
CCI IDS





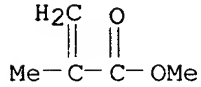
CM 3

CRN 27697-00-3
CMF C14 H14 O6



CM 4

CRN 80-62-6
CMF C5 H8 O2



L61 ANSWER 17 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:334681 HCAPLUS
DN 129:55220
TI Heat-resistant **lens** materials and manufacture of **lenses** using the same, with high **refractive** index and Abbe number and adhesion to mold during cast polymerization
IN Amagai, Shoichi; Shimuta, Masanori; Watari, Isao
PA Mitsubishi Gas Chemical Co., Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI JP 10139881 A2 19980526 JP 1996-295202 19961107

AB The title materials are obtained by polymg. (A) 5-70% compns. contg. .gtoreq.1 (meth)acrylate compds. having 2-6 (meth)acryloyl groups, (B) 15-35% compns. comprising divinylbenzene and compds. having arom. vinyl group and (meth)acryloyl group, (C) 15-60% compns. (S content .gtoreq.35%) from aliph. polymercapto compds. contg. .gtoreq.2 mercapto groups and no electron-withdrawing groups, and (D) silane compds. (1-10 Si) at (A + B + C):D = 100:0.0001-5 and [overall arom. vinyl + overall (meth)acryloyl group]/overall mercapto group molar ratio 1.3-7 and have **refractive** index 1.54-1.64. Pentaerythritol tetraacrylate 49, 96:4 divinylbenzene-Et vinyl ether 33, 3-methacryloyloxypropyldimethoxysilane 0.05, and bis(2-mercaptoethyl) sulfide 18 parts were polymd. in the presence of tert-butylperoxy iso-Pr carbonate in a glass mold to obtain a **lens** with **refractive** index 1.581, Abbe no. 41, Vicat softening point 135.degree., and good release properties and showing no peeling during polymn.

IC ICM C08G075-04
ICS C08B003-00; C08G077-28; G02B001-04; G02C007-02

CC 38-3 (Plastics Fabrication and Uses)

ST acrylic **lens** peeling resistance cast polymn

IT **Lenses**
(heat-resistant **lens** materials and manuf. of **lenses** using the same, with high **refractive** index and Abbe no. and adhesion to mold during cast polymn.)

IT **208757-90-8P**, Divinylbenzene-ethyl vinyl ether-(3-methacryloyloxypropyl)dimethoxysilane-pentaerythritol tetraacrylate copolymer
RL: DEV (Device component use); **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(heat-resistant **lens** materials and manuf. of **lenses** using the same, with high **refractive** index and Abbe no. and adhesion to mold during cast polymn.)

IT 3570-55-6, Bis(2-mercaptoethyl) sulfide 136122-15-1, 2,5-Bis(mercaptomethyl)-1,4-dithiane 149334-77-0, 2-(2-Mercaptoethylthio)-1,3-dimercaptopropane
RL: NUU (Other use, unclassified); USES (Uses)
(heat-resistant **lens** materials and manuf. of **lenses** using the same, with high **refractive** index and Abbe no. and adhesion to mold during cast polymn.)

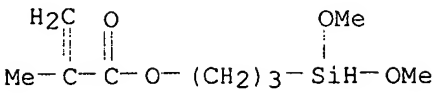
IT **208757-90-8P**, Divinylbenzene-ethyl vinyl ether-(3-methacryloyloxypropyl)dimethoxysilane-pentaerythritol tetraacrylate copolymer
RL: DEV (Device component use); **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(heat-resistant **lens** materials and manuf. of **lenses** using the same, with high **refractive** index and Abbe no. and adhesion to mold during cast polymn.)

RN 208757-90-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(dimethoxysilyl)propyl ester, polymer with 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, diethenylbenzene and ethoxyethene (9CI) (CA INDEX NAME)

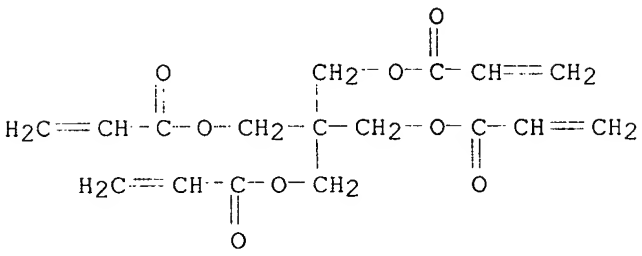
CM 1

CRN 100577-12-6
CMF C9 H18 O4 Si



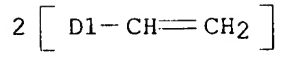
CM 2

CRN 4986-89-4
CMF C17 H20 O8



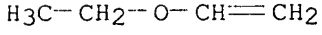
CM 3

CRN 1321-74-0
CMF C10 H10
CCI IDS



CM 4

CRN 109-92-2
CMF C4 H8 O



L61 ANSWER 18 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:700873 HCAPLUS
DN 127:319551
TI Electrically induced concentration profiles of nanoparticles in a MMA-silane matrix: a new method to obtain GRIN-**lenses**
AU Oliveira, P. W.; Krug, H.; Schmidt, H.
CS Institut Neue Materialien, Saarbruecken, D-66123, Germany

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

SO Proceedings of SPIE-The International Society for Optical Engineering (1997), 3136(Sol-Gel Optics IV), 442-451
CODEN: PSISDG; ISSN: 0277-786X
PB SPIE-The International Society for Optical Engineering
DT Journal
LA English

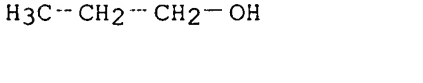
AB A new technique to produce a radial gradient in the **refractive** index (r-GRIN) in org.-inorg. nanocomposite materials using sol-gel techniques in combination with electrophoretically induced concn. profiles of oxide nanoparticles is presented. The composite material is based on methacryloxypropyltrimethoxysilane (MPTS), zirconium n-propoxide (ZR), Methacrylic acid (MA) and tetraethylene glycol dimethacrylate (TEGDMA). Irgacure 184 was used as a photosensitive initiator. The surface of these particles is enriched with MA which is linked by a chelating complex to the initial ZR component. The TEGDMA component is used to introduce more flexibility in the org. inorg. network and to reduce polymn. stresses. Elec. charges on the ZrO2 nanoparticle surface force the particles to diffuse in the gel state by elec. fields employed by appropriate electrodes in presence of an elec. field. The movement and interdiffusion of the Zr-nanoparticles in the matrix were measured by zeta-potential measurements and by photon-correlation spectroscopy. In the performed expts., a radial elec. field amplitude of 200 V/cm was used and held for 5 h keeping the material in the gel state. The variation of **refractive** index in real time was measured by Mach-Zehnder interferometry. After the electrophoretic process, a polymn. step was carried out to immobilize the .DELTA.n gradient. .DELTA.N was measured by ellipsometry and the value of 0.07 was obtained for a sample of 1 cm in diam. The form of the concn. profile and hence from the index profile was detected by energy dispersive x-ray anal. measurements.

CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
ST sol gel nanoparticle zirconium methacryloxypropyltrimethoxysilane; **lens** sol gel nanoparticle zirconium methacryloxypropyltrimethoxysilane; electrophoresis sol gel nanoparticle zirconium methacryloxypropyltrimethoxysilane
IT Electrophoresis
Lenses
Nanoparticles
Refractive index
Sol-gel processing
Zeta potential
(elec. induced concn. profiles of sol-gel nanoparticles in methacrylate-silane matrix for GRIN **lenses**)
IT **197656-95-4P**, Methacrylic acid-methacryloxypropyltrimethoxysilane-tetraethylene glycol dimethacrylate-zirconium n-propoxide copolymer
RL: PRP (Properties); **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(elec. induced concn. profiles of sol-gel nanoparticles in methacrylate-silane matrix for GRIN **lenses**)
IT **197656-95-4P**, Methacrylic acid-methacryloxypropyltrimethoxysilane-tetraethylene glycol dimethacrylate-zirconium n-propoxide copolymer
RL: PRP (Properties); **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)
(elec. induced concn. profiles of sol-gel nanoparticles in methacrylate-silane matrix for GRIN **lenses**)
RN 197656-95-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with oxybis(2,1-ethanediyloxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), 1-propanol zirconium(4+) salt and

3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

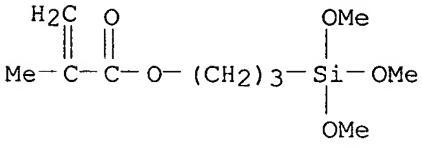
CRN 23519-77-9
CMF C3 H8 O . 1/4 Zr



1/4 Zr(IV)

CM 2

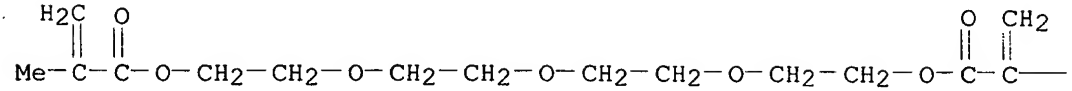
CRN 2530-85-0
CMF C10 H20 O5 Si



CM 3

CRN 109-17-1
CMF C16 H26 O7

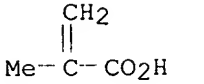
PAGE 1-A



PAGE 1-B

CM 4

CRN 79-41-4
CMF C4 H6 O2



L61 ANSWER 19 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1996:319129 HCAPLUS
DN 125:67846
TI Intraocular **lenses** comprising high **refractive** index siloxanes and high **refractive** index polymeric resin components
IN Yang, Shih Liang S.
PA Allergan, Inc., USA
SO U.S., 8 pp., Cont.-in-part of U.S. Ser. No. 48,092, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5512609	A	19960430	US 1994-193966	19940209
	US 5233007	A	19930803	US 1992-868412	19920414
	WO 9521889	A1	19950817	WO 1995-US1636	19950207
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9519138	A1	19950829	AU 1995-19138	19950207
	EP 743967	A1	19961127	EP 1995-911645	19950207
	R: DE, FR, GB, NL, SE				
	JP 09508665	T2	19970902	JP 1995-521320	19950207
	US 5623029	A	19970422	US 1995-473393	19950607
PRAI	US 1992-868412		19920414		
	US 1993-48092		19930415		
	US 1994-193966		19940209		
	WO 1995-US1636		19950207		

AB Intraocular **lenses** comprise high **refractive** index polysiloxane-based cross-linked copolymers and high **refractive** index polymeric resin components. Such compns., which have **refractive** indexes of at least about 1.46, preferably at least about 1.48, are useful in producing foldable intraocular **lenses**. Tetramethylstyrylcyclotetrasiloxane 1088, and 1,2-divinyltetramethyldisiloxane 6 g were heated under N followed by addn. of 0.18% tetra-Me ammonia hydroxide to obtained a mixt. having **refractive** index of 1.52-1.54. A MQ resin having **refractive** index of 1.53 was added to above polymer so that the resin was equal to 10% by wt. of the total batch followed by addn. of tetra-Me ammonia hydroxide and liq. organohydrogen polysiloxane having a **refractive** index of 1.50 to obtain a reinforced elastomeric compn. for intraocular **lenses**.
IC ICM G02C007-04
ICS C08L083-05; C08L083-07
NCL 523107000
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 35, 38
ST intraocular **lense** siloxane resin **refractive** index
IT Siloxanes and Silicones, biological studies
RL: DEV (Device component use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(intraocular **lenses** comprising high **refractive**

index siloxanes and high **refractive** index polymeric resin components)

IT **Lenses**
(intraocular, intraocular **lenses** comprising high **refractive** index siloxanes and high **refractive** index polymeric resin components)

IT 100-42-5, Styrene, reactions 2370-88-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(intraocular **lenses** comprising high **refractive** index siloxanes and high **refractive** index polymeric resin components)

IT 170443-66-0P **178266-34-7P**
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)
(intraocular **lenses** comprising high **refractive** index siloxanes and high **refractive** index polymeric resin components)

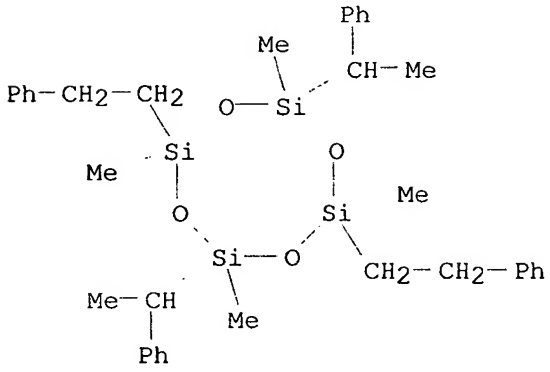
IT **178266-34-7P**
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)
(intraocular **lenses** comprising high **refractive** index siloxanes and high **refractive** index polymeric resin components)

RN 178266-34-7 HCAPLUS

CN Cyclotetrasiloxane, 2,4,6,8-tetramethyl-2,6-bis(1-phenylethyl)-4,8-bis(2-phenylethyl)-, polymer with 1,3-diethenyl-1,1,3,3-tetramethyldisiloxane (9CI) (CA INDEX NAME)

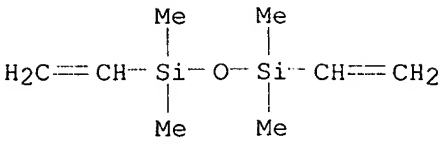
CM 1

CRN 170443-66-0
CMF C36 H48 O4 Si4



CM 2

CRN 2627-95-4
CMF C8 H18 O Si2



L61 ANSWER 20 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:928205 HCAPLUS
DN 123:322181
TI Intraocular **lenses** made from high **refractive** index elastomeric compositions
IN Yang, Shih-Liang Stanley
PA Allergan, Inc., USA
SO PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9521889	A1	19950817	WO 1995-US1636	19950207
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5512609	A	19960430	US 1994-193966	19940209
	AU 9519138	A1	19950829	AU 1995-19138	19950207
	EP 743967	A1	19961127	EP 1995-911645	19950207
	R: DE, FR, GB, NL, SE				
	JP 09508665	T2	19970902	JP 1995-521320	19950207
PRAI	US 1994-193966		19940209		
	US 1992-868412		19920414		
	US 1993-48092		19930415		
	WO 1995-US1636		19950207		

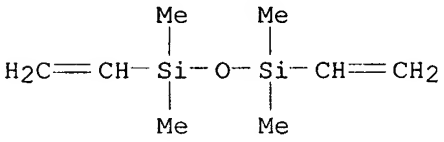
AB Elastomeric compns. comprising high **refractive** index polysiloxane-based cross-linked copolymers and high **refractive** index polymeric resin components are used for the prepn. of foldable intraocular **lenses**. Tetramethylstyrylcyclotetrasiloxane (prepn. given) 1088, and 2-divinyltetramethyldisiloxane 6g were mixed, followed by addn. of tetra-Me ammonia hydroxide as catalyst and heated for 3h N at 100.degree. to obtain vinyl-terminated methyl-styrylpolysiloxane which was used in prepn. of intraocular **lenses**.

IC ICM C08L083-04
ICS G02B001-04
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 35, 38
ST intraocular **lens** high **refractive** index elastomer
IT **Lenses**
(intraocular, intraocular **lenses** made from high **refractive** index elastomeric compns.)
IT **87564-11-2P**
RL: DEV (Device component use); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(intraocular **lenses** made from high **refractive** index elastomeric compns.)
IT 100-42-5, Styrene, reactions 2370-88-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(intraocular **lenses** made from high **refractive** index

elastomeric compns.)
IT 170443-66-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intraocular **lenses** made from high **refractive** index elastomeric compns.)
IT **87564-11-2P**
RL: DEV (Device component use); **SPN (Synthetic preparation)**; THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(intraocular **lenses** made from high **refractive** index elastomeric compns.)
RN 87564-11-2 HCAPLUS
CN Cyclotetrasiloxane, 2,4,6,8-tetramethyl-, polymer with 1,3-diethenyl-1,1,3,3-tetramethyldisiloxane (9CI) (CA INDEX NAME)

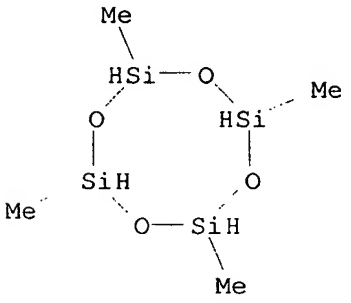
CM 1

CRN 2627-95-4
CMF C8 H18 O Si2



CM 2

CRN 2370-88-9
CMF C4 H16 O4 Si4



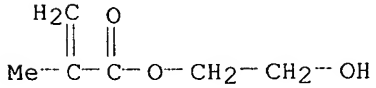
L61 ANSWER 21 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:638066 HCAPLUS
DN 123:34101
TI Effect of structure of fluorinated oxygen-containing monomers on properties of fluoroorganosilicon polymers
AU Rakhimov, A. I.; Kryukova, E. G.; Vostrikova, O. V.
CS Inst. Khim. Probl. Ekol., Volgograd, Russia
SO Zhurnal Organicheskoi Khimii (1994), 30(8), 1217-18
CODEN: ZORKAE; ISSN: 0514-7492
PB Nauka

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

DT Journal
LA Russian
AB The effects of length and structure of fluoroalkyl and fluorooxyalkyl chains in corresponding (meth)acrylates on water sorption, d., **refractive** index, and light transmission by their copolymers with vinyltriethoxysilane and nonfluoro methacrylates were studied. Fluorooxyalkyl chains, having increased electron d., improved hydrophilic properties of the fluorinated acrylic silsesquioxanes intended for the manuf. of contact **lenses**. The copolymers were prepd. by peroxide-initiated or photochem. radical polymn., followed by alk. hydrolysis.
CC 36-5 (Physical Properties of Synthetic High Polymers)
Section cross-reference(s): 63
ST fluoroalkyl acrylate vinyltriethoxysilane copolymer property; fluorooxyalkyl methacrylate vinyltriethoxysilane copolymer property; silsesquioxane acrylic fluoropolymer property; contact **lense** silsesquioxane acrylic fluoropolymer; optical property silsesquioxane acrylic fluoropolymer; water sorption silsesquioxane acrylic fluoropolymer
IT **Refractive** index and Optical **refraction**
Sorption
(length and structure of fluoroalkyl and fluorooxyalkyl chains in (meth)acrylates and properties of their copolymers with vinyltriethoxysilane)
IT **Lenses**
(contact, length and structure of fluoroalkyl and fluorooxyalkyl chains in (meth)acrylates and properties of their copolymers with vinyltriethoxysilane)
IT **164354-58-9P 164354-61-4P 164354-63-6P 164354-64-7P**
RL: NUU (Other use, unclassified); PRP (Properties); **SPN (Synthetic preparation); PREP (Preparation)**; USES (Uses)
(length and structure of fluoroalkyl and fluorooxyalkyl chains in (meth)acrylates and properties of their copolymers with vinyltriethoxysilane)
IT **164354-58-9P 164354-61-4P 164354-63-6P 164354-64-7P**
RL: NUU (Other use, unclassified); PRP (Properties); **SPN (Synthetic preparation); PREP (Preparation)**; USES (Uses)
(length and structure of fluoroalkyl and fluorooxyalkyl chains in (meth)acrylates and properties of their copolymers with vinyltriethoxysilane)
RN 164354-58-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenyltriethoxysilane, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2,2,3,3,4,4,5,5-octafluoropentyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

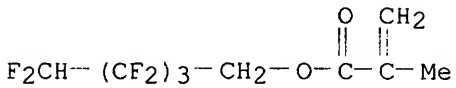
CM 1

CRN 868-77-9
CMF C6 H10 O3



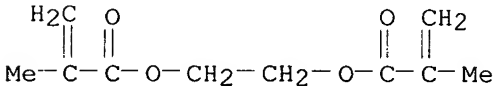
CM 2

CRN 355-93-1
CMF C9 H8 F8 O2



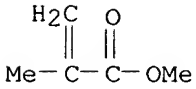
CM 3

CRN 97-90-5
CMF C10 H14 O4



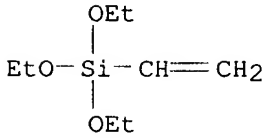
CM 4

CRN 80-62-6
CMF C5 H8 O2



CM 5

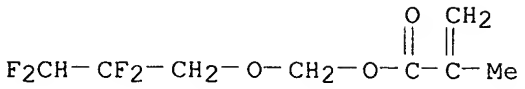
CRN 78-08-0
CMF C8 H18 O3 Si



RN 164354-61-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenyltriethoxysilane, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and (2,2,3,3-tetrafluoropropoxy)methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

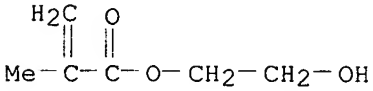
CM 1

CRN 164354-59-0
CMF C8 H10 F4 O3



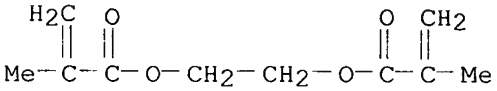
CM 2

CRN 868-77-9
CMF C6 H10 O3



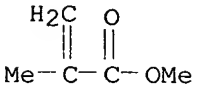
CM 3

CRN 97-90-5
CMF C10 H14 O4



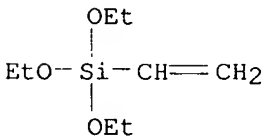
CM 4

CRN 80-62-6
CMF C5 H8 O2



CM 5

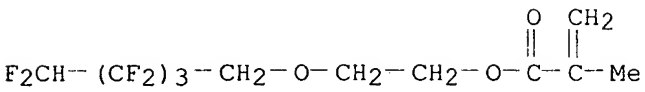
CRN 78-08-0
CMF C8 H18 O3 Si



RN 164354-63-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenyltriethoxysilane, 2-hydroxyethyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and 2-[(2,2,3,3,4,4,5,5-octafluoropentyl)oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

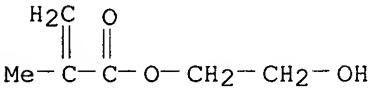
CM 1

CRN 59006-70-1
CMF C11 H12 F8 O3



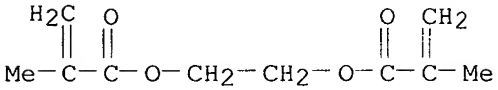
CM 2

CRN 868-77-9
CMF C6 H10 O3



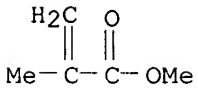
CM 3

CRN 97-90-5
CMF C10 H14 O4



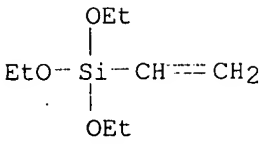
CM 4

CRN 80-62-6
CMF C5 H8 O2



CM 5

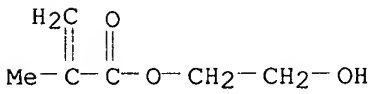
CRN 78-08-0
CMF C8 H18 O3 Si



RN 164354-64-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with ethenyltriethoxysilane, 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

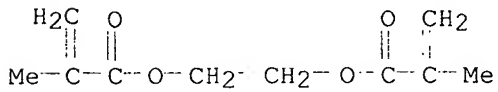
CM 1

CRN 868-77-9
CMF C6 H10 O3



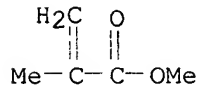
CM 2

CRN 97-90-5
CMF C10 H14 O4



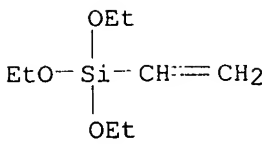
CM 3

CRN 80-62-6
CMF C5 H8 O2



CM 4

CRN 78-08-0
CMF C8 H18 O3 Si



L61 ANSWER 22 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1993:656573 HCAPLUS
DN 119:256573
TI Intraocular **lenses** containing high-**refractive** index silicones
IN Yang, Shih Liang S.
PA Allergan, Inc., USA
SO U.S., 8 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5233007	A	19930803	US 1992-868412	19920414
	WO 9321258	A1	19931028	WO 1993-US3497	19930413
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9342853	A1	19931118	AU 1993-42853	19930413
	AU 664290	B2	19951109		
	EP 636155	A1	19950201	EP 1993-912235	19930413
	EP 636155	B1	19980715		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 07505914	T2	19950629	JP 1993-518581	19930413
	AT 168392	E	19980815	AT 1993-912235	19930413
	ES 2118959	T3	19981001	ES 1993-912235	19930413
	US 5512609	A	19960430	US 1994-193966	19940209
	US 5420213	A	19950530	US 1994-226223	19940411
	US 5623029	A	19970422	US 1995-473393	19950607
PRAI	US 1992-868412		19920414		
	WO 1993-US3497		19930413		
	US 1993-48092		19930415		
	US 1994-193966		19940209		

AB A siloxane R3[Si(R1R2R4)O]n(SiR2O)mSiR2R3 [R, R4 =independently (substituted) alkyl, (substituted) aryl; R1 = independently a divalent radical; R2 = independently (substituted aryl; R3 = monovalent (substituted) hydrocarbyl with multiple bond; n = 6-500; m = 0-500], useful for prepg. intraocular **lenses** with **refractive** index .gtoreq.1.46 are prepd. The polymers can be crosslinked with, e.g., an organohydrogenpolysiloxane (I). Thus, reaction of tetramethyltetrahydrocyclosiloxane and styrene at 40-75.degree. in presence of Pt catalyst gave the PhCH2CH2 and PhCHMe tetrasubstituted tetramethylcyclotetrasiloxane, which reacted under N at 100.degree. in presence of Me4NOH to give vinyl-terminated methylstyrylpolysiloxane (styryl = PhCH2CH2 or PhCHMe) (II) with **refractive** index = 1.54; crosslinking II with I gave an elastomer suitable for making intraocular **lenses**.

IC ICM C08G077-20
NCL 528032000
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 39

ST intraocular **lens** silicone rubber; siloxane intraocular **lens refractive** index

IT Rubber, silicone, biological studies
RL: PREP (Preparation)
(prepn. of, for intraocular **lenses** with high **refractive** index)

IT **Lenses**
(intraocular, prepn. of, with high-**refractive** index siloxanes)

IT **151206-14-3P**
RL: **PREP (Preparation)**
(prepn. of, for intraocular **lenses** with high **refractive** index)

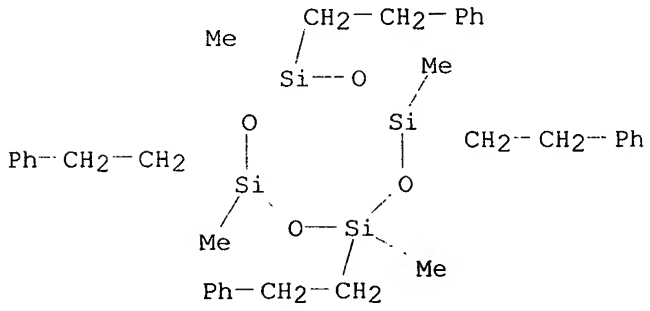
IT **151206-14-3P**
RL: **PREP (Preparation)**
(prepn. of, for intraocular **lenses** with high **refractive** index)

RN 151206-14-3 HCAPLUS

CN Cyclotetrasiloxane, 2,4,6,8-tetramethyl-2,4,6,8-tetrakis(2-phenylethyl)-, polymer with 1,3-diethenyl-1,1,3,3-tetramethyldisiloxane (9CI) (CA INDEX NAME)

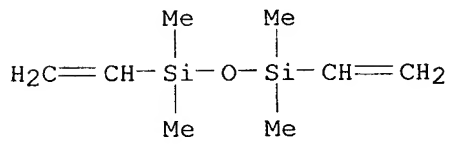
CM 1

CRN 18817-51-1
CMF C36 H48 O4 Si4



CM 2

CRN 2627-95-4
CMF C8 H18 O Si2



L61 ANSWER 23 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1993:109800 HCAPLUS
DN 118:109800
TI Composition for rigid gas permeable contact **lenses**

IN Chen, Richard Y. S.
PA Optical Research Inc., USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

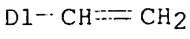
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5162469	A	19921110	US 1991-740591	19910805

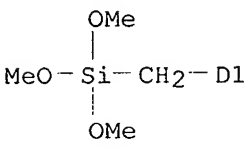
AB A copolymer for making contact **lenses** comprises a polymerizable fluoromonomer and a polymerizable hydrolyzable silicone monomer. A polymer was prepd. from 2,2,2-trifluoroethyl methacrylate 20.0, styrylmethyltrimethoxysilane 18.0, methacryloxypropyltris(trimethylsiloxy) silane 41.7, methacrylic acid 16.0, ethylene glycol dimethacrylate 4.0, and Vazo 52 (initiator) 0.03 g. **Lenses** from this polymer are highly transparent and have uniform optical properties. They have an O permeability of 50 DK units at 35.degree., a contact angle of <20.degree., and a **refractive** index of 1.47. The **lens** can correct an astigmatism to about 4.0 DO.

IC ICM C08F214-18
ICS G03B021-46
NCL 526245000
CC 63-7 (Pharmaceuticals)
ST contact **lens** fluoropolymer silicone
IT **Lenses**
(contact, rigid gas permeable, fluoropolymer-silicones for, prepn. of)
IT Siloxanes and Silicones, preparation
RL: PREP (Preparation)
(fluorine-contg., prepn. of, for rigid gas permeable contact **lenses**)
IT Fluoropolymers
RL: PREP (Preparation)
(siloxane-, prepn. of, for rigid gas permeable contact **lenses**)
IT 78181-78-9P **146191-58-4P 146191-59-5P**
146191-60-8P 146225-25-4P 146225-26-5P
RL: **PREP (Preparation)**
(prepn. of, for rigid gas permeable contact **lenses**)
IT **146191-58-4P 146191-59-5P 146191-60-8P**
146225-25-4P 146225-26-5P
RL: **PREP (Preparation)**
(prepn. of, for rigid gas permeable contact **lenses**)
RN 146191-58-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), [(ethenylphenyl)methyl]trimethoxysilane, 2,2,2-trifluoroethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

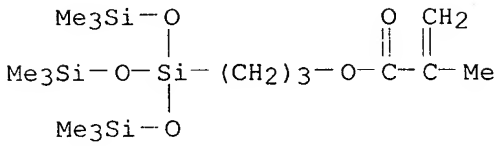
CRN 78181-78-9
CMF C12 H18 O3 Si
CCI IDS





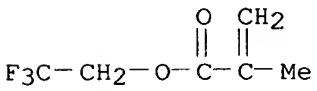
CM 2

CRN 17096-07-0
CMF C16 H38 O5 Si4



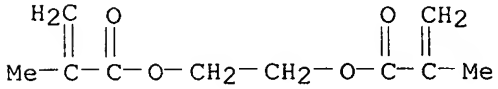
CM 3

CRN 352-87-4
CMF C6 H7 F3 O2



CM 4

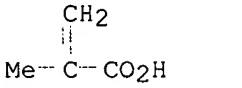
CRN 97-90-5
CMF C10 H14 O4



CM 5

CRN 79-41-4

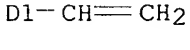
CMF C4 H6 O2

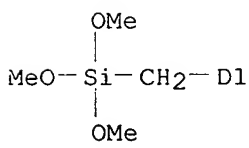


RN 146191-59-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), [(ethenylphenyl)methyl]trimethoxysilane, methyl 2-methyl-2-propenoate, 2,2,2-trifluoroethyl 2-methyl-2-propenoate, 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

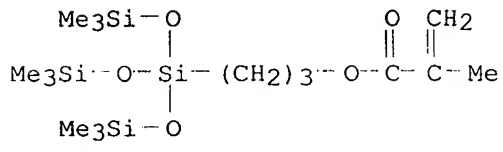
CRN 78181-78-9
CMF C12 H18 O3 Si
CCI IDS





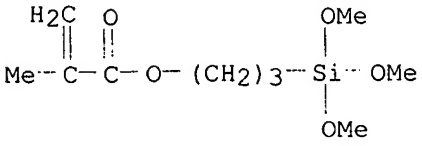
CM 2

CRN 17096-07-0
CMF C16 H38 O5 Si4



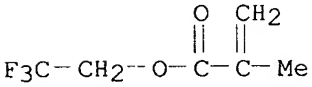
CM 3

CRN 2530-85-0
CMF C10 H20 O5 Si



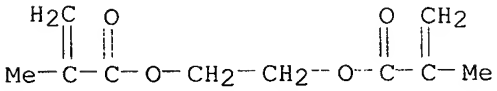
CM 4

CRN 352-87-4
CMF C6 H7 F3 O2



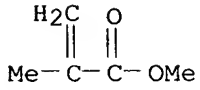
CM 5

CRN 97-90-5
CMF C10 H14 O4



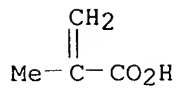
CM 6

CRN 80-62-6
CMF C5 H8 O2



CM 7

CRN 79-41-4
CMF C4 H6 O2

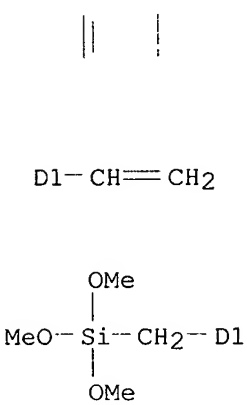


RN 146191-60-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), [(ethenylphenyl)methyl]trimethoxysilane, 2-hydroxypropyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate and

3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

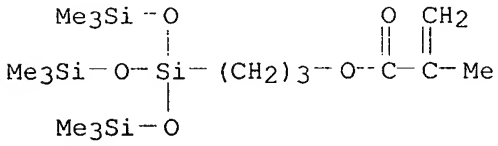
CM 1

CRN 78181-78-9
CMF C12 H18 O3 Si
CCI IDS



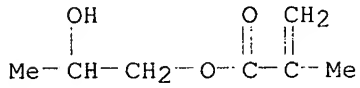
CM 2

CRN 17096-07-0
CMF C16 H38 O5 Si4



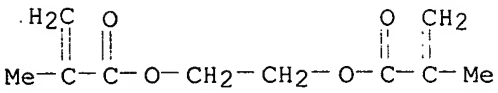
CM 3

CRN 923-26-2
CMF C7 H12 O3



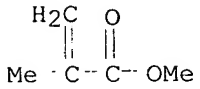
CM 4

CRN 97-90-5
CMF C10 H14 O4



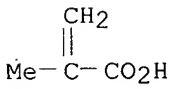
CM 5

CRN 80-62-6
CMF C5 H8 O2



CM 6

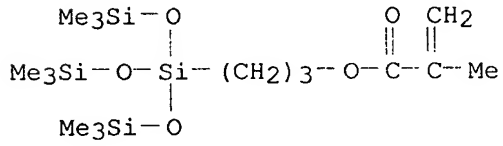
CRN 79-41-4
CMF C4 H6 O2



RN 146225-25-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), methyl 2-methyl-2-propenoate, 2,2,2-trifluoroethyl 2-methyl-2-propenoate, 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

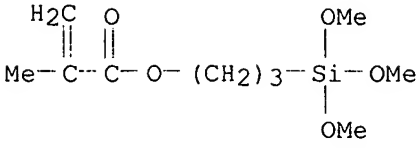
CM 1

CRN 17096-07-0
CMF C16 H38 O5 Si4



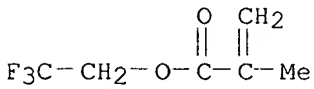
CM 2

CRN 2530-85-0
CMF C10 H20 O5 Si



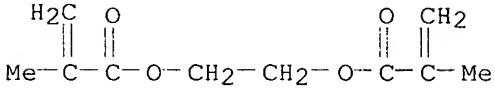
CM 3

CRN 352-87-4
CMF C6 H7 F3 O2



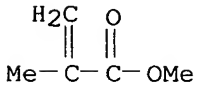
CM 4

CRN 97-90-5
CMF C10 H14 O4



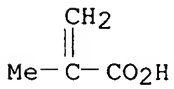
CM 5

CRN 80-62-6
CMF C5 H8 O2



CM 6

CRN 79-41-4
CMF C4 H6 O2

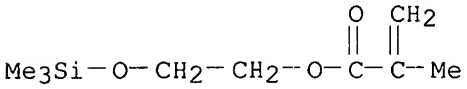


RN 146225-26-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 2-hydroxyethyl 2-methyl-2-propenoate, 2,2,2-trifluoroethyl 2-methyl-2-propenoate, 3-[3,3,3-trimethyl-1,1-

bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate and
2-[(trimethylsilyl)oxy]ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

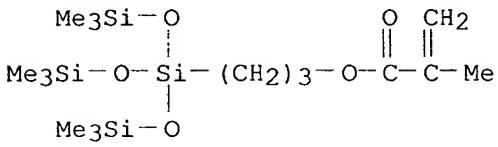
CM 1

CRN 17407-09-9
CMF C9 H18 O3 Si



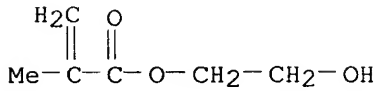
CM 2

CRN 17096-07-0
CMF C16 H38 O5 Si4



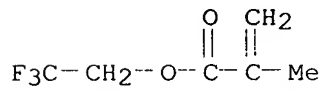
CM 3

CRN 868-77-9
CMF C6 H10 O3



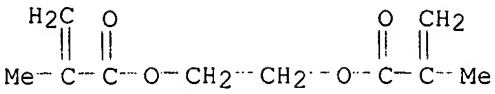
CM 4

CRN 352-87-4
CMF C6 H7 F3 O2



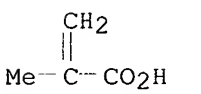
CM 5

CRN 97-90-5
CMF C10 H14 O4



CM 6

CRN 79-41-4
CMF C4 H6 O2



L61 ANSWER 24 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1993:109797 HCAPLUS
DN 118:109797
TI Manufacture of contact **lenses** from siloxane polymers
IN Kawakami, Yusuke
PA Menicon Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04264421	A2	19920921	JP 1991-24646	19910219
JP 2885946	B2	19990426		

AB Copolymers of styrene derivs. CH2:CH-p-C6H4-SiMeR4OSiR2R3R1 [R1 = tris(trimethylsiloxy)siloxy, trimethylsiloxy, etc.; R2, R3 = Me, methylsiloxy, Ph, etc.; R4 = tris(trimethylsiloxy)siloxy, triphenylsiloxy, etc.] are used in manufg. contact **lenses** which are durable, having high **refractive** indexes and permeability to O. Thus, p-[5,5-bis(trimethylsiloxy)heptamethyltetrasiloxan-1-yl]styrene was prepd., polymd., and made into a contact **lens**.
IC ICM G02C007-04
ICS C08F230-08; G02B001-04
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 25, 35
ST contact **lens** styrene siloxane polymer
IT **Lenses**
(contact, manuf. of, styrene deriv. polymers for)
IT 6075-86-1, p-(3-Chlorotetramethyldisiloxan-1-yl)styrene
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrolysis of, in contact **lens** prepn.)
IT 114556-28-4P, p-[5,5,5-Triphenyltetramethyltrisiloxanyl]styrene
117547-74-7P 129088-45-5P 129088-47-7P, p-[3,3,3-Triphenyldimethyldisiloxanyl]styrene
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and polymn. of, for contact **lens** manuf.)
IT **114556-29-5P 117547-75-8P 117547-76-9P**
129088-46-6P 129088-48-8P
RL: THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)

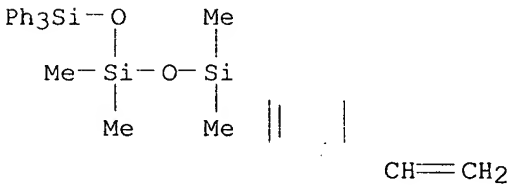
(prepn. of, for contact lenses)

IT **114556-29-5P 117547-75-8P 117547-76-9P 129088-46-6P 129088-48-8P**
RL: THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(prepn. of, for contact lenses)

RN 114556-29-5 HCAPLUS
CN Trisiloxane, 1-(4-ethenylphenyl)-1,1,3,3-tetramethyl-5,5,5-triphenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

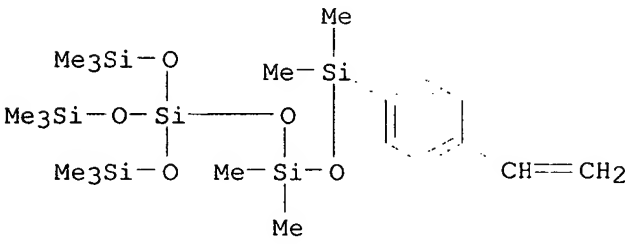
CRN 114556-28-4
CMF C30 H34 O2 Si3



RN 117547-75-8 HCAPLUS
CN Tetrasiloxane, 1-(4-ethenylphenyl)-1,1,3,3,7,7,7-heptamethyl-5,5-bis[(trimethylsilyl)oxy]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

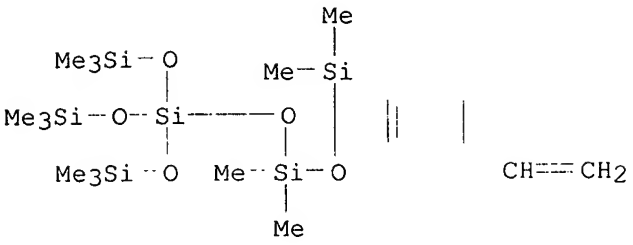
CRN 117547-74-7
CMF C21 H46 O5 Si6



RN 117547-76-9 HCAPLUS
CN Tetrasiloxane, 1-(4-ethenylphenyl)-1,1,3,3,7,7,7-heptamethyl-5,5-bis[(trimethylsilyl)oxy]-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 117547-74-7
CMF C21 H46 O5 Si6



CM 2

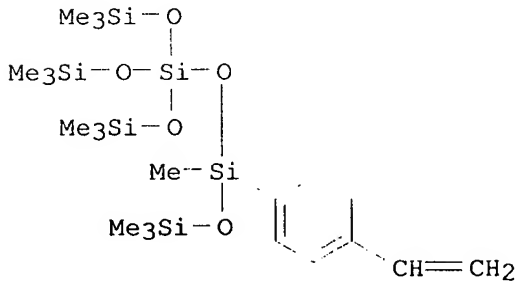
CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

RN 129088-46-6 HCAPLUS
CN Tetrasiloxane, 3-(4-ethenylphenyl)-1,1,1,3,7,7,7-heptamethyl-5,5-bis[(trimethylsilyl)oxy]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

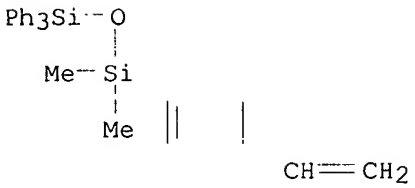
CRN 129088-45-5
CMF C21 H46 O5 Si6



RN 129088-48-8 HCAPLUS
CN Disiloxane, 1-(4-ethenylphenyl)-1,1-dimethyl-3,3,3-triphenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 129088-47-7
CMF C28 H28 O Si2



L61 ANSWER 25 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1992:598577 HCAPLUS
DN 117:198577
TI Manufacture of oxygen permeable contact **lenses** containing interpenetrating polymer networks
IN Pettigrew, Lisa; Ratkowski, Donald A.; Burke, William E.; Weinschenk, Joseph I. Iii
PA Pilkington Visioncare Inc., USA
SO Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 488627	A2	19920603	EP 1991-310842	19911125
	EP 488627	A3	19930217		
	EP 488627	B1	19960214		
	R: AT, CH, DE, FR, GB, IT, LI, NL				
	US 5170192	A	19921208	US 1990-619735	19901129
	AU 9188131	A1	19920604	AU 1991-88131	19911125
	AU 639159	B2	19930715		
	AT 134171	E	19960215	AT 1991-310842	19911125
	CA 2056266	AA	19920530	CA 1991-2056266	19911127
	JP 04293012	A2	19921016	JP 1991-316800	19911129
	JP 3124343	B2	20010115		
PRAI	US 1990-619735	A	19901129		

AB An O-permeable bifocal contact **lens** which has a distance vision portion and a near vision portion is made from materials with different **refractive** indexes. A crosslinked polymer with **refractive** index of .ltoreq.1.49 is used for the distance portion of the **lens**. For the near vision portion of the **lens**, the **refractive** index is .ltoreq.1.54. The polymer systems involve interpenetrating polymer networks. Various monomers e.g., Me methacrylate, acryloyloxyalkylsilanes, vinylanisole, vinylpyrrolidone, etc., were used for the polym. and formation of interpenetrating networks. The resulting bifocal **lens** blank was cut to desired parameters.

IC ICM B29D011-00
ICS G02C007-06; G02B001-04
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 35
ST polyacrylate contact **lens** prepn; contact **lens** gas permeable polymer prepn; interpenetrating polymer network contact **lens** prepn; bifocal **lens** polymer prepn
IT **Lenses**
(contact, bifocal, interpenetrating polyacrylate networks for, prepn. of)
IT **Lenses**
(contact, oxygen-permeable, bifocal, interpenetrating polyacrylate

networks for, prepn. of)

IT 143606-66-0P 143606-67-1P **144145-72-2P 144145-73-3P 144169-00-6P 144169-01-7P**
RL: **PREP (Preparation)**
(prepn. of, for interpenetrating polymer networks in manuf. of oxygen-permeable contact **lenses**)

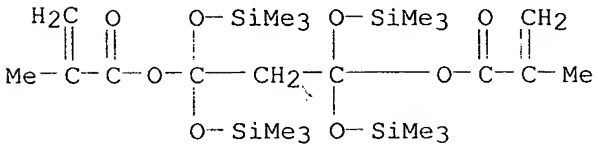
IT **144145-72-2P 144145-73-3P 144169-00-6P 144169-01-7P**
RL: **PREP (Preparation)**
(prepn. of, for interpenetrating polymer networks in manuf. of oxygen-permeable contact **lenses**)

RN 144145-72-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with 3-[1-hydroxy-3,3,3-trimethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate, methyl 2-propenoate, 1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-propanediyl bis(2-methyl-2-propenoate), 2,2,2-trifluoroethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

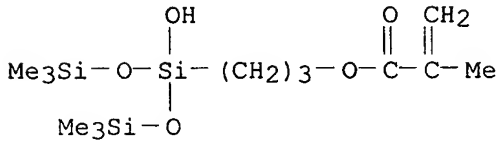
CM 1

CRN 144145-71-1
CMF C23 H48 O8 Si4



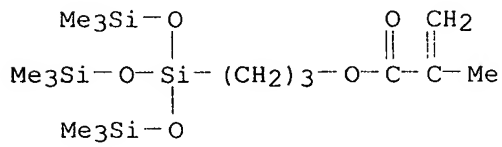
CM 2

CRN 83692-44-8
CMF C13 H30 O5 Si3



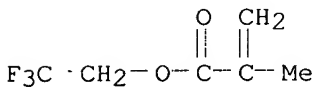
CM 3

CRN 17096-07-0
CMF C16 H38 O5 Si4



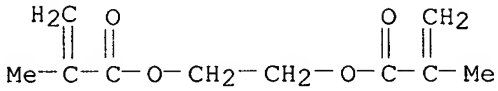
CM 4

CRN 352-87-4
CMF C6 H7 F3 O2



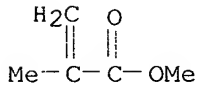
CM 5

CRN 97-90-5
CMF C10 H14 O4



CM 6

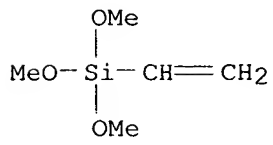
CRN 80-62-6
CMF C5 H8 O2



RN 144145-73-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with 1-ethenyl-4-methoxybenzene, ethenyltrimethoxysilane and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

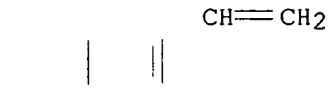
CM 1

CRN 2768-02-7
CMF C5 H12 O3 Si



CM 2

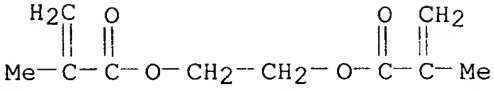
CRN 637-69-4
CMF C9 H10 O



MeO

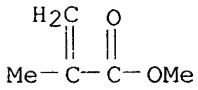
CM 3

CRN 97-90-5
CMF C10 H14 O4



CM 4

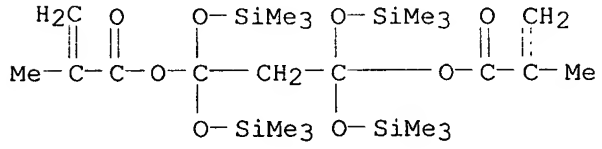
CRN 80-62-6
CMF C5 H8 O2



RN 144169-00-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate), 3-[1-hydroxy-3,3,3-trimethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate, 1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-propanediyl bis(2-methyl-2-propenoate), 2,2,2-trifluoroethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

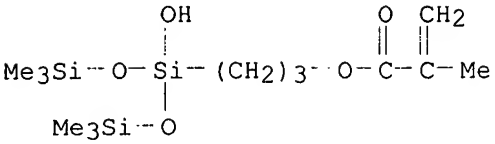
CM 1

CRN 144145-71-1
CMF C23 H48 O8 Si4



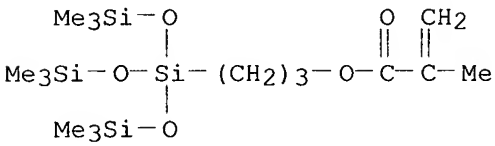
CM 2

CRN 83692-44-8
CMF C13 H30 O5 Si3



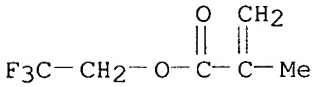
CM 3

CRN 17096-07-0
CMF C16 H38 O5 Si4



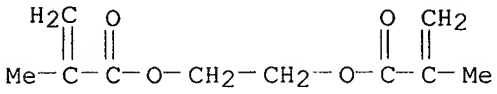
CM 4

CRN 352-87-4
CMF C6 H7 F3 O2



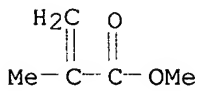
CM 5

CRN 97-90-5
CMF C10 H14 O4



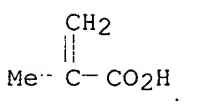
CM 6

CRN 80-62-6
CMF C5 H8 O2



CM 7

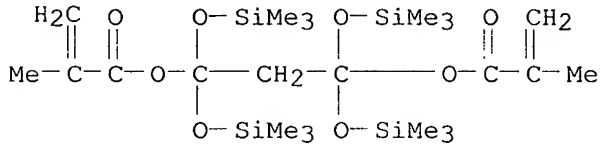
CRN 79-41-4
CMF C4 H6 O2



RN 144169-01-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 3-[1-hydroxy-3,3,3-trimethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate, 1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-propanediyl bis(2-methyl-2-propenoate), 2,2,2-trifluoroethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

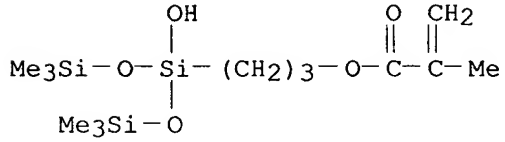
CM 1

CRN 144145-71-1
CMF C23 H48 O8 Si4



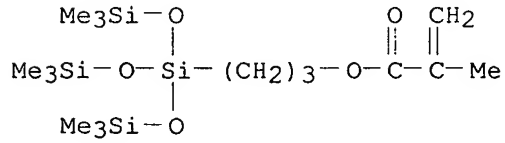
CM 2

CRN 83692-44-8
CMF C13 H30 O5 Si3



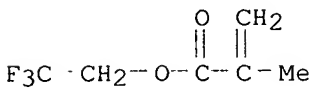
CM 3

CRN 17096-07-0
CMF C16 H38 O5 Si4



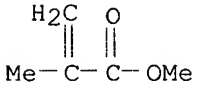
CM 4

CRN 352-87-4
CMF C6 H7 F3 O2



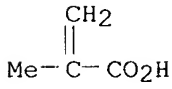
CM 5

CRN 80-62-6
CMF C5 H8 O2



CM 6

CRN 79-41-4
CMF C4 H6 O2



L61 ANSWER 26 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1992:221626 HCAPLUS
DN 116:221626
TI Manufacture of plastic **lenses**
IN Funae, Yasuaki; Yamamoto, Tetsuya; Takemura, Manabu; Matsuda, Tatsuto
PA Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 03287101	A2	19911217	JP 1990-84818	19900402

AB A plastic **lens** is prepd. by polymg. monomers (Markush structures given) in the presence of silane coupling agents and/or epoxy compds. The monomers include styrene, styrene derivs., unsatd. nitriles, (meth)acrylic acid esters, allyl ethers, urethane (meth)acrylates, etc. These **lenses** have high **refractive** indexes. Thus, bis(2-methacryloylthioethyl)sulfide 50, styrene 40, and acrylonitrile 10 parts by wt. were polymd. in the presence of 20 ppm 3-methacryloyloxypropyltrimethoxysilane and 1 part glycidyl methacrylate,

0.2 part 2,2'-azobis(2,4-dimethylisovaleronitrile), and 0.1 part lauroyl peroxide, and molded to give a **lens**.

IC ICM G02B001-04
ICS C08F002-02; C08F002-44; C08F020-38; C08F299-00

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 38

ST plastic **lens** coupling agent silane

IT **Lenses**
(**eyeglass**, manuf. of, acrylate polymers for)

IT 141312-65-4P **141313-69-1P** **141313-70-4P**
141313-71-5P 141313-72-6P 141313-74-8P
141313-77-1P 141328-64-5P
RL: **PREP (Preparation)**
(prepn. of, for plastic **lens** manuf.)

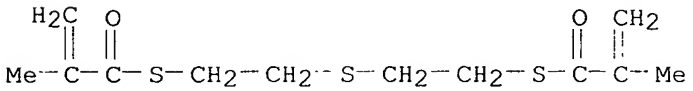
IT **141313-69-1P** **141313-70-4P** **141313-71-5P**
141313-72-6P **141313-77-1P** **141328-64-5P**
RL: **PREP (Preparation)**
(prepn. of, for plastic **lens** manuf.)

RN 141313-69-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with ethenylbenzene, 2-propenenitrile, S,S'-(thiodi-2,1-ethanediyl) bis(2-methyl-2-propenethioate) and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

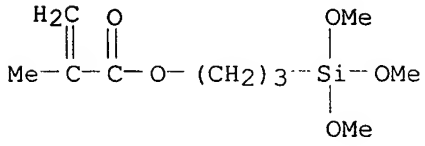
CM 1

CRN 117651-91-9
CMF C12 H18 O2 S3



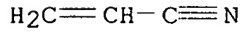
CM 2

CRN 2530-85-0
CMF C10 H20 O5 Si



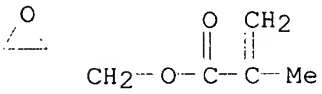
CM 3

CRN 107-13-1
CMF C3 H3 N



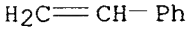
CM 4

CRN 106-91-2
CMF C7 H10 O3



CM 5

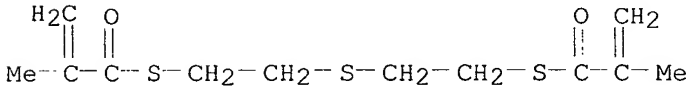
CRN 100-42-5
CMF C8 H8



RN 141313-70-4 HCAPLUS
CN 2-Propenethioic acid, 2-methyl-, S,S'-(thiodi-2,1-ethanediyl) ester, polymer with (3-chloropropyl)trimethoxysilane, ethenylbenzene and 2-propenenitrile (9CI) (CA INDEX NAME)

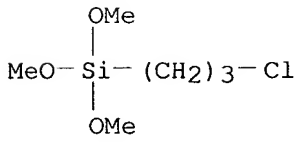
CM 1

CRN 117651-91-9
CMF C12 H18 O2 S3



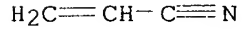
CM 2

CRN 2530-87-2
CMF C6 H15 Cl O3 Si



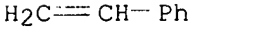
CM 3

CRN 107-13-1
CMF C3 H3 N



CM 4

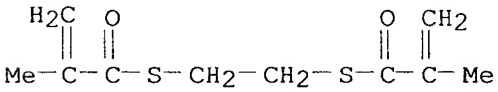
CRN 100-42-5
CMF C8 H8



RN 141313-71-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, phenylmethyl ester, polymer with (3-chloropropyl)trimethoxysilane, S,S'-1,2-ethanediyl bis(2-methyl-2-propenethioate) and ethenylbenzene (9CI) (CA INDEX NAME)

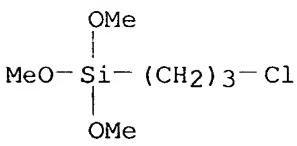
CM 1

CRN 117675-95-3
CMF C10 H14 O2 S2



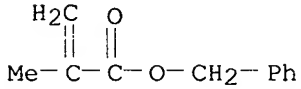
CM 2

CRN 2530-87-2
CMF C6 H15 Cl O3 Si



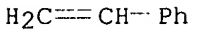
CM 3

CRN 2495-37-6
CMF C11 H12 O2



CM 4

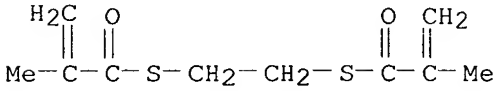
CRN 100-42-5
CMF C8 H8



RN 141313-72-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with S,S'-1,2-ethanediyl bis(2-methyl-2-propenethioate), ethenylbenzene and 2-propenenitrile (9CI) (CA INDEX NAME)

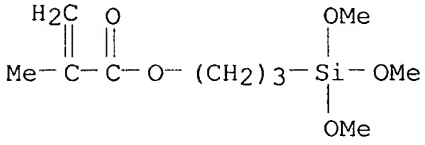
CM 1

CRN 117675-95-3
CMF C10 H14 O2 S2



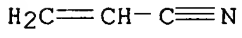
CM 2

CRN 2530-85-0
CMF C10 H20 O5 Si



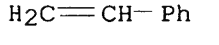
CM 3

CRN 107-13-1
CMF C3 H3 N



CM 4

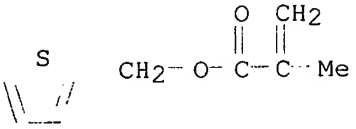
CRN 100-42-5
CMF C8 H8



RN 141313-77-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, oxybis(2,1-ethanediyloxy-2,1-ethanediyl) ester, polymer with ethenylbenzene, 2-thienylmethyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

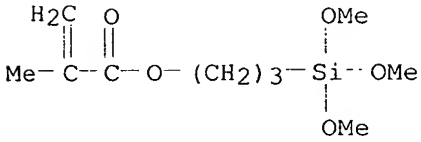
CM 1

CRN 105581-49-5
CMF C9 H10 O2 S



CM 2

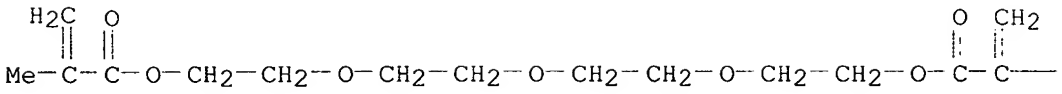
CRN 2530-85-0
CMF C10 H20 O5 Si



CM 3

CRN 109-17-1
CMF C16 H26 O7

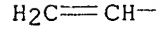
PAGE 1-A



PAGE 1-B

CM 4

CRN 100-42-5
CMF C8 H8



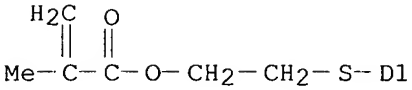
RN 141328-64-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with 2-[(1,2-dibromo-2,3,3a,4,7,7a-hexahydro-4,7-methano-1H-indenyl)thio]ethyl

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

2-methyl-2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

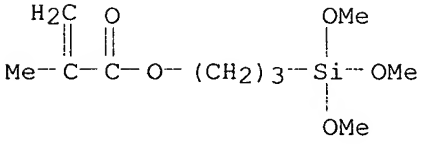
CM 1

CRN 141312-64-3
CMF C16 H20 Br2 O2 S
CCI IDS



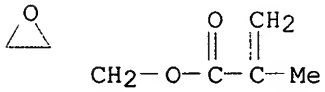
CM 2

CRN 2530-85-0
CMF C10 H20 O5 Si



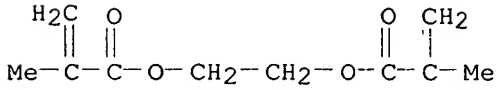
CM 3

CRN 106-91-2
CMF C7 H10 O3



CM 4

CRN 97-90-5
CMF C10 H14 O4



L61 ANSWER 27 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1991:614921 HCAPLUS
DN 115:214921
TI Coating compositions containing acrylate polymers and metal fluorides for plastic **eyeglasses**
IN Kawashima, Junji; Iryo, Takeaki
PA Seiko Epson Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 03006265	A2	19910111	JP 1989-138714	19890531
JP 2730185	B2	19980325		

AB Active energy-curable coating compns., useful for plastic **eyeglasses** as well as camera **lenses**, optical **lenses**, etc., contain 10-70 wt.% (based on total solid ingredients) MgF2 and/or CaF2 fine granules (particle size 1-50 .mu.m) and 90-30 wt.% polymerizable org. compds. and photopolymn. initiators. Pentaerythritol tetraacrylate 3.0, trimethylolpropane triacrylate 2.0, perfluoroisopropyl methacrylate 3.0, 20% MgF2 sol (particle size 10-20 .mu.m, dispersed in aq. EtOH) 40, benzoin Me ether 0.1 wt. part, and silicone surfactant were mixed in AcOEt, coated on **lenses** (Seiko Plax), and irradiated under high-pressure Hg lamp for 3 s. The formed membrane showed **refractive** index 1.405 and good dye affinity, adhesion property, and wear-, water-, and chem. resistance.
IC ICM C09D004-00
ICS C08J007-04; C09D004-00; G02B001-10
ICA G02C007-00
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 42
ST plastic **eyeglass** coating magnesium fluoride; calcium fluoride coating plastic **eyeglass**; photocurable coating fluoride **lens**
IT Polycarbonates, uses and miscellaneous
RL: USES (Uses)
(**eyeglasses**, coatings contg. metal fluorides and acrylate copolymers for)
IT **Lenses**
(photocurable coatings contg. metal fluorides and acrylate copolymers for)
IT **Lenses**
(**eyeglass**, photocurable coatings contg. metal fluorides and acrylate copolymers for)
IT 9011-14-7, Poly(methyl methacrylate) 25656-90-0, Seiko Plax 92529-47-0, SEIKO Hi-Lord
RL: BIOL (Biological study)
(**eyeglasses**, coatings contg. magnesium fluoride and acrylate copolymers for)
IT 136434-14-5P **136434-16-7P** 136930-33-1P
RL: **PREP (Preparation)**
(prepn. of, coatings contg. magnesium fluoride sol and, for plastic **eyeglasses**)
IT 7783-40-6, Magnesium fluoride 7789-75-5, Calcium fluoride, biological studies
RL: BIOL (Biological study)

(sol, photocurable coatings contg., with low-**refractive** index, for plastic **eyeglasses**)

IT **136434-16-7P**

RL: **PREP (Preparation)**

(prepn. of, coatings contg. magnesium fluoride sol and, for plastic **eyeglasses**)

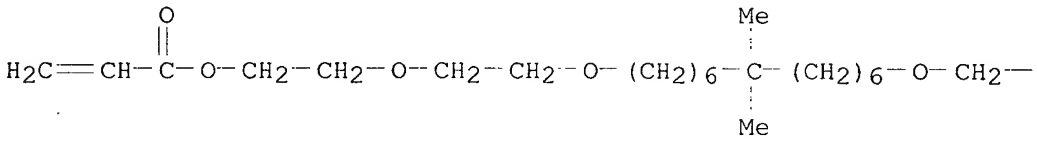
RN 136434-16-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2,2,2-tetrafluoro-1-(trifluoromethyl)ethyl ester, polymer with 2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 13,13-dimethyl-3,6,20,23-tetraoxapentacosane-1,25-diyl di-2-propenoate, 2-[[3-hydroxy-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

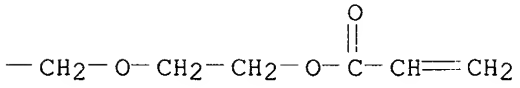
CM 1

CRN 136434-15-6
CMF C29 H52 O8

PAGE 1-A

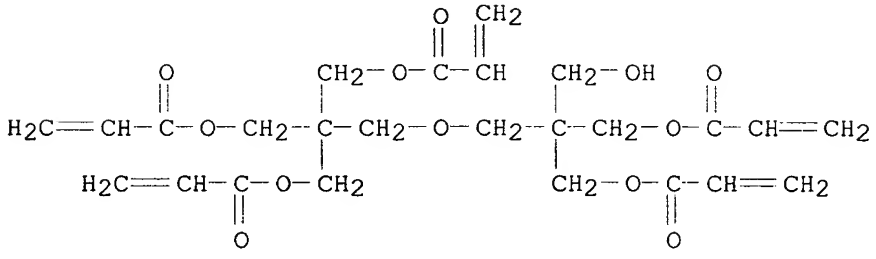


PAGE 1-B



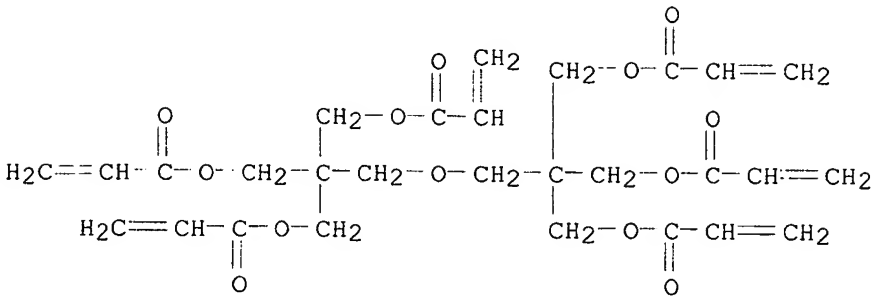
CM 2

CRN 60506-81-2
CMF C25 H32 O12



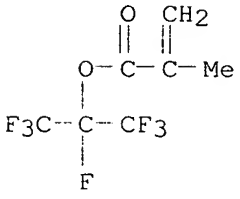
CM 3

CRN 29570-58-9
CMF C28 H34 O13



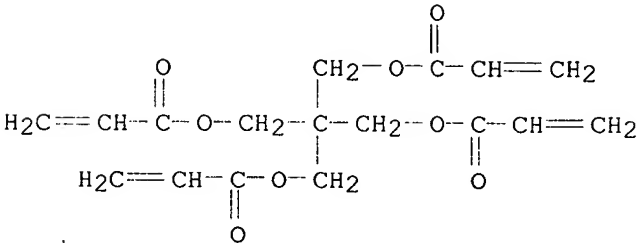
CM 4

CRN 7459-59-8
CMF C7 H5 F7 O2



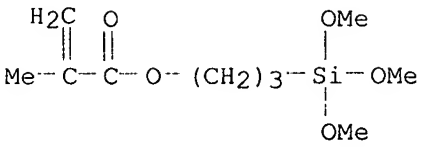
CM 5

CRN 4986-89-4
CMF C17 H20 O8



CM 6

CRN 2530-85-0
CMF C10 H20 O5 Si



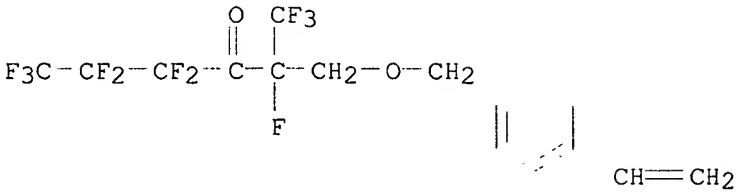
L61 ANSWER 28 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1991:566702 HCAPLUS
DN 115:166702
TI Copolymers of styrene derivatives for artificial **eye lenses**
IN Kamya, Naotaka; Yanagawa, Hiroaki; Yamamoto, Yasushi; Yoshioka, Hiroshi
PA Menicon Co., Ltd., Japan; Shin-Etsu Chemical Industry Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 03122612	A2	19910524	JP 1989-261144	19891005

AB **Lenses** such as contact **lens**, intraocular **lens**, artificial cornea, etc., are prepd. from a copolymer of Si-contg. styrene derivs. and CH2:CH(p-C6H4)CH2OCH2C(CF3)F[OCF2CF(CF3)]kOC3F7 where k = 0-4. The copolymer is hydrophilic, machinable, permeable to gases, mech. strong, and has a high **refractive** index. Thus, a copolymer was prepd. by polymg. tris(trimethylsiloxy)silylstyrene 36, 4-vinylbenzyl-2,4,4,5,5,6,6,6-octafluoro-2-trifluoromethyl-3-oxahexyl ether 64, 4-vinylbenzyl methacrylate 4, N-vinylpyrrolidone 5.6, and methacrylic acid 4.4 parts by wt. The phys. properties of the copolymer were shown.
IC ICM G02C007-04
ICS A61L027-00
CC 63-7 (Pharmaceuticals)
ST silylstyrene copolymer artificial **eye lens**; styrene copolymer contact **lens**
IT **Lenses**
(contact, manuf. of, from styrene deriv. copolymers)
IT **Eye**
(cornea, artificial, manuf. of, from styrene deriv. copolymers)
IT **Lenses**
(intraocular, manuf. of, from styrene deriv. copolymers)
IT **136424-38-9P 136424-40-3P**
RL: **PREP (Preparation)**
(prepn. of, for artificial **eye lenses**)
IT **136424-38-9P 136424-40-3P**
RL: **PREP (Preparation)**
(prepn. of, for artificial **eye lenses**)
RN 136424-38-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 3-(ethenylphenyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, 2-[[(4-ethenylphenyl)methoxy]methyl]-1,1,1,2,4,4,5,5,6,6,6-undecafluoro-3-hexanone, (4-ethenylphenyl)methyl 2-methyl-2-propenoate and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM 1

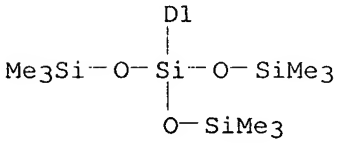
CRN 136424-37-8
CMF C16 H11 F11 O2



CM 2

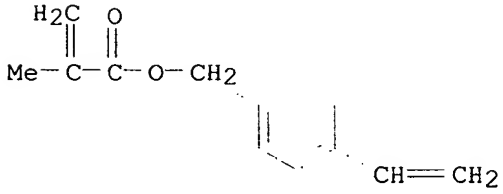
CRN 129735-06-4
CMF C17 H34 O3 Si4
CCI IDS

D1—CH=CH2



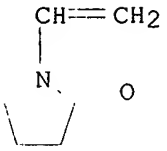
CM 3

CRN 99413-45-3
CMF C13 H14 O2



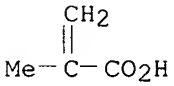
CM 4

CRN 88-12-0
CMF C6 H9 N O



CM 5

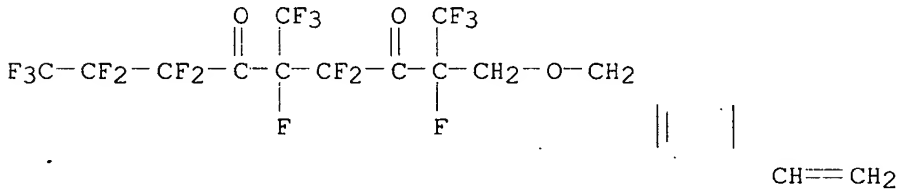
CRN 79-41-4
CMF C4 H6 O2



RN 136424-40-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 3-(ethenylphenyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, 2-[[(4-ethenylphenyl)methoxy]methyl]-1,1,1,2,4,4,5,7,7,8,8,9,9,9-tetradecafluoro-5-(trifluoromethyl)-3,6-nonanedione, (4-ethenylphenyl)methyl 2-methyl-2-propenoate and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

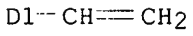
CM 1

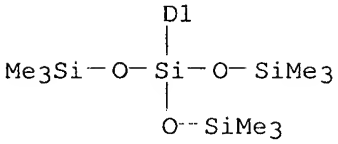
CRN 136424-39-0
CMF C20 H11 F17 O3



CM 2

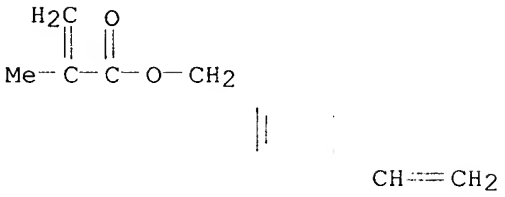
CRN 129735-06-4
CMF C17 H34 O3 Si4
CCI IDS





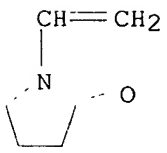
CM 3

CRN 99413-45-3
CMF C13 H14 O2



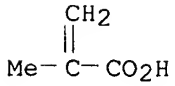
CM 4

CRN 88-12-0
CMF C6 H9 N O



CM 5

CRN 79-41-4
CMF C4 H6 O2



L61 ANSWER 29 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1991:457227 HCAPLUS
DN 115:57227
TI Vinylbenzyl (meth)acrylate as crosslinking agent for copolymers for ocular **lens** material
IN Yanagawa, Hiroaki; Kamiya, Naotaka
PA Menicon Co., Ltd., Japan
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 381005	A2	19900808	EP 1990-101243	19900122
	EP 381005	A3	19920226		
	EP 381005	B1	19950111		
	R: DE, FR, GB				
	JP 02196809	A2	19900803	JP 1989-16620	19890126
	JP 2515010	B2	19960710		
	US 5041511	A	19910820	US 1990-462547	19900109
	CA 2007771	AA	19900726	CA 1990-2007771	19900115
	CA 2007771	C	19971007		
	AU 9047962	A1	19900809	AU 1990-47962	19900115
	AU 603960	B2	19901129		
PRAI	JP 1989-16620		19890126		

OS MARPAT 115:57227
AB Vinylbenzyl (meth)acrylate, CH2:C(R1)COOCH2C6H4CH:CH2 (R1 = H, Me), is a crosslinking agent for prepg. contact **lens** copolymers contg. styrene and (meth)acrylic monomers. Preferably, the monomers are Si-contg. styrenes and F-contg. (meth)acrylates. A copolymer was made using 2,2,2,2',2',2'-hexafluoroisopropyl methacrylate 17, methacrylic acid 4.8, tris(trimethylsiloxy)silylstyrene 83, N-vinylpyrrolidone 6.2, 4-vinylbenzyl methacrylate 6, and azobisdimethylvaleronitrile 0.3 parts. The rod-shaped product was transparent with no distortion, and had a high **refractive** index and excellent mech. strength, hardness, and O2 permeability.
IC ICM G02B001-04
ICS C08F246-00
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 35
ST contact **lens** vinylbenzyl acrylate crosslinker; methacrylate vinylbenzyl crosslinker contact **lens**
IT Crosslinking agents
(vinylbenzyl (meth)acrylates, for prepg. acrylate-styrene copolymers for contact **lenses**)
IT **Lenses**
(contact, vinylbenzyl (meth)acrylate crosslinking agents for copolymers for)
IT **Lenses**
(contact, hard, oxygen-permeable, vinylbenzyl (meth)acrylate crosslinking agents for copolymers for)
IT 114573-55-6 134874-54-7
RL: BIOL (Biological study)
(as crosslinking agent for acrylate- and methacrylate-styrene copolymers for contact **lenses**)
IT 99413-45-3P
RL: PREP (Preparation)
(prepn. of, as crosslinking agent for acrylate-styrene copolymers for

contact **lenses**)

IT **129735-07-5P 134874-52-5P 134874-53-6P**
RL: THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(prepn. of, for contact **lenses**)

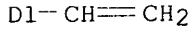
IT **129735-07-5P 134874-52-5P 134874-53-6P**
RL: THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(prepn. of, for contact **lenses**)

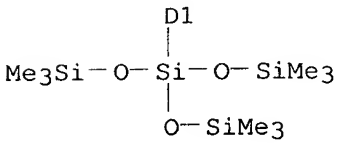
RN 129735-07-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 3-(ethenylphenyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, (4-ethenylphenyl)methyl 2-methyl-2-propenoate, 1-ethenyl-2-pyrrolidinone and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

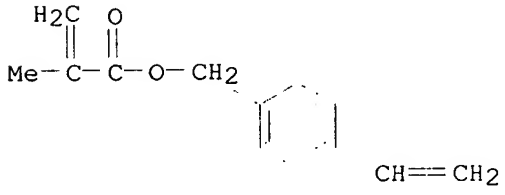
CRN 129735-06-4
CMF C17 H34 O3 Si4
CCI IDS





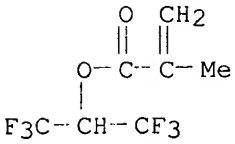
CM 2

CRN 99413-45-3
CMF C13 H14 O2



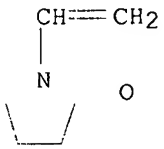
CM 3

CRN 3063-94-3
CMF C7 H6 F6 O2



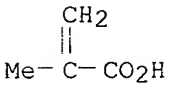
CM 4

CRN 88-12-0
CMF C6 H9 N O



CM 5

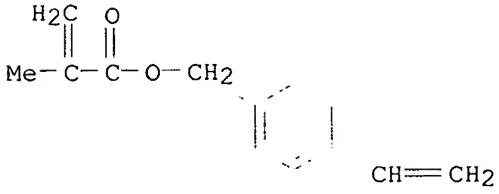
CRN 79-41-4
CMF C4 H6 O2



RN 134874-52-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with (4-ethenylphenyl)methyl 2-methyl-2-propenoate, (ethenylphenyl)trimethylsilane, 1-ethenyl-2-pyrrolidinone and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

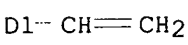
CM 1

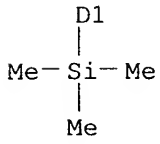
CRN 99413-45-3
CMF C13 H14 O2



CM 2

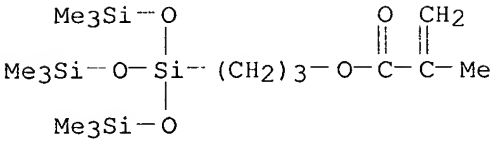
CRN 97822-60-1
CMF C11 H16 Si
CCI IDS





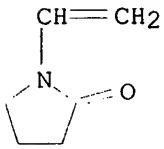
CM 3

CRN 17096-07-0
CMF C16 H38 O5 Si4



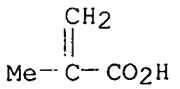
CM 4

CRN 88-12-0
CMF C6 H9 N O



CM 5

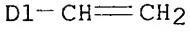
CRN 79-41-4
CMF C4 H6 O2

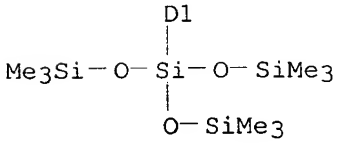


RN 134874-53-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with 3-(ethenylphenyl)-1,1,1,5,5,5-hexamethyl-3-[(trimethylsilyl)oxy]trisiloxane, 1-ethenyl-2-pyrrolidinone, methyl 2-methyl-2-propenoate, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

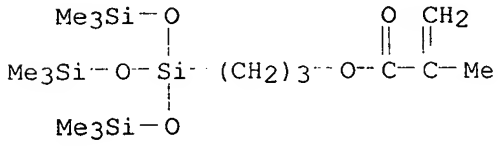
CRN 129735-06-4
CMF C17 H34 O3 Si4
CCI IDS





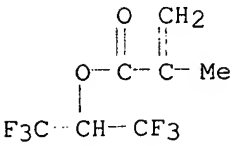
CM 2

CRN 17096-07-0
CMF C16 H38 O5 Si4



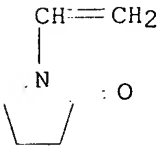
CM 3

CRN 3063-94-3
CMF C7 H6 F6 O2



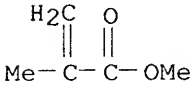
CM 4

CRN 88-12-0
CMF C6 H9 N O



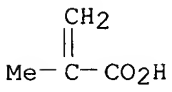
CM 5

CRN 80-62-6
CMF C5 H8 O2



CM 6

CRN 79-41-4
CMF C4 H6 O2



L61 ANSWER 30 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1991:254062 HCAPLUS
DN 114:254062
TI Preparation of vinyl carbonate and vinyl carbamate copolymers for contact **lenses**
IN Bambury, Ronald E.; Seelye, David E.
PA Bausch and Lomb Inc., USA
SO Eur. Pat. Appl., 36 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	EP 396364	A2	19901107	EP 1990-304659	19900430
	EP 396364	A3	19911127		
	EP 396364	B1	19970611		
	R: DE, ES, FR, GB, IT, SE				
	US 5070215	A	19911203	US 1989-346204	19890502
	CA 2014210	AA	19901102	CA 1990-2014210	19900409
	JP 03072506	A2	19910327	JP 1990-110664	19900427
	JP 3274681	B2	20020415		
	EP 757033	A2	19970205	EP 1996-202972	19900430
	EP 757033	A3	19970305		
	EP 757033	B1	19990303		
	R: DE, ES, FR, GB, IT, SE				
	ES 2104583	T3	19971016	ES 1990-304659	19900430
	ES 2131907	T3	19990801	ES 1996-202972	19900430
	AU 9054616	A1	19901108	AU 1990-54616	19900501
	AU 645749	B2	19940127		
	BR 9002045	A	19910813	BR 1990-2045	19900502
	US 5610252	A	19970311	US 1995-450510	19950525
	US 6166236	A	20001226	US 1997-784637	19970121
PRAI	US 1989-346204	A	19890502		
	EP 1990-304659	A3	19900430		
	US 1991-724091	A3	19910719		
	US 1995-450510	A3	19950525		

AB Vinyl carbonate and vinyl carbamte monomers (Markush given) are prepd. and are used to produce copolymers useful as hydrogel, soft nonhydrogel, and/or rigid gas-permeable contact **lens** materials. Thus, 3-aminopropyl(trimethylsiloxy)silane was reacted with vinyl chloroformate to form 3-[tris(trimethylsiloxy)silyl]propyl vinyl carbamate, which was copolymd. in different ratios with N-vinylpyrrolidenone and 1,5-bis(vinyloxycarboxyloxy)-2,2,3,3,4,4-hexachloropentane to form soft hydrogel copolymer. Tensile strength, O permeability, **refractive** index, and other properties of the hydrogel polymers were detd. Synthesis of many monomers and crosslinkers is included.

IC ICM C08F218-00
ICS G02B001-04; C07C271-08; C07C069-00; C07D207-404; C07D207-27

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 23, 24, 25, 27, 28, 35

ST vinyl carbonate prepn contact **lens**; carbamate vinyl prepn contact **lens**; contact **lens** vinyl copolymer

IT Polycarbonates, biological studies
RL: BIOL (Biological study)
(Me vinyl siloxane-, hard contact **lens** from)

IT Siloxanes and Silicones, biological studies
RL: BIOL (Biological study)
(Me vinyl, polycarbonate-, hard contact **lens** from)

IT **Lenses**
(contact, hard, vinyl carbonate and vinyl carbamate copolymers for)

IT Siloxanes and Silicones, preparation
RL: PREP (Preparation)
(vinyl group-terminated, prepn. of, as monomer for contact **lens** copolymer)

IT 40965-80-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, in monomer prepn. for contact **lens** copolymer)

IT 72978-28-0P 134073-16-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reaction of, in prepn. of contact **lens** copolymer)
IT 134027-40-0P 134073-06-6P 134073-17-9P 134073-18-0P 134073-19-1P
134073-20-4P 134073-21-5P 134073-22-6P 134073-23-7P 134073-24-8P
134096-37-0P
RL: PREP (Preparation)
(prepn. of, as crosslinker for contact **lens** copolymer)
IT 57933-88-7P 57933-92-3P 96383-58-3P 119448-07-6P 134072-84-7P
134072-85-8P 134072-86-9P 134072-87-0P 134072-88-1P 134072-89-2P
134072-90-5P 134072-91-6P 134072-92-7P 134072-93-8P 134072-94-9P
134072-95-0P 134072-96-1P 134072-97-2P 134072-99-4P 134073-00-0P
134073-02-2P 134073-03-3P 134073-04-4P 134073-05-5P 134073-06-6P
134073-09-9P 134073-10-2P 134073-11-3P 134073-12-4P 134073-13-5P
134073-14-6P 134073-15-7P 134073-25-9P, 1,2,3-
Tris(vinyloxycarbonyloxy)propane 134073-26-0P
RL: PREP (Preparation)
(prepn. of, as monomer for contact **lens** copolymer)
IT 88-12-0DP, polymers with vinyl-terminated siloxanes and hexafluoropentane divinylcarbonate and vinylpyrrolidinone 134072-97-2DP, polymers with vinyl-terminated siloxanes and bis(vinyloxycarbonyloxy)propane and vinylpyrrolidinone 134073-00-0DP, polymers with vinyl-terminated siloxanes and bis(vinyloxycarbonyloxy)hexafluoropropyl vinyl carbonate and vinylpyrrolidinone 134073-02-2DP, polymers with vinyl-terminated siloxanes and tris(trimethylsiloxy)propyl vinyl carbonate and bis(vinyloxycarbonyloxy)propane 134073-20-4DP, polymers with vinyl-terminated siloxanes and [tris(trimethylsiloxy)silyl]propyl vinyl carbonate and vinylpyrrolidinone 134073-24-8DP, polymers with vinyl-terminated siloxanes and [tris(trimethylsiloxy)silyl]propyl vinyl carbonate and vinylpyrrolidinone **134119-45-2P**
134119-46-3P 134119-47-4P 134119-48-5P
134119-49-6P
RL: THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(prepn. of, for contact **lens**)
IT 134073-08-8P
RL: PREP (Preparation)
(prepn. of, for monomer for contact **lens** copolymer)
IT 107-19-7, Propargyl alcohol 112-27-6, Triethylene glycol 124-09-4, 1,6-Diaminohexane, reactions 126-30-7, 2,2-Dimethyl-1,3-propanediol 141-43-5, Aminoethanol, reactions 373-44-4, 1,8-Diaminooctane 376-90-9, 2,2,3,3,4,4-Hexafluoro-1,5-pentanediol 25322-68-3, Poly(ethylene glycol) 25322-69-4, Polypropylene glycol
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in crosslinker prepn. for contact **lens** copolymer)
IT 109-89-7, Diethylamine, reactions 540-51-2, 2-Bromoethanol 4801-27-8, 2-Bromoethyl chloroformate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in intermediate prepn. for contact **lens** copolymer)
IT 56-81-5, Glycerol, reactions 75-89-8, 2,2,2-Trifluoroethanol 98-52-2, 4-t-Butylcyclohexanol 99-71-8 110-85-0, Piperazine, reactions 115-77-5, Pentaerythritol, reactions 124-40-3, Dimethylamine, reactions 141-43-5, Ethanolamine, reactions 340-04-5, 1-Phenyl-2,2,2-trifluoroethanol 373-88-6, 2,2,2-Trifluoroethylamine hydrochloride 556-67-2, Octamethylcyclotetrasiloxane 768-94-5, Tricyclo[3.3.1.13,7]decan-1-amine 768-95-6, 1-Adamantanol 769-92-6 770-71-8, Tricyclo[3.3.1.13,7]decane-1-methanol 920-66-1, 1,1,1,3,3,3-Hexafluoro-2-propanol 999-97-3, Hexamethyldisilazane 2374-14-3 2754-27-0, Trimethylsilyl acetate 2916-68-9 2917-47-7, Trimethylsilyl-3-propanol 2937-50-0, Allyl chloroformate 3069-25-8

3219-63-4, Trimethylsilylmethanol 3445-11-2 5931-17-9 6066-82-6, N-Hydroxysuccinimide 6240-11-5, Tricyclo[3.3.1.13,7]decane-1-ethanol 7328-91-8, 2,2-Dimethyl-1,3-diaminopropane 13074-39-0, Tricyclo[3.3.1.13,7]decan-2-amine 18077-31-1, 3-Chloropropyltris(trimethylsiloxy)silane 18190-44-8, N-(2-Hydroxyethyl)succinimide 25357-81-7 62012-15-1 72978-28-0 102229-10-7 103542-02-5 134072-85-8 134072-98-3 134073-01-1 134073-07-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in monomer prepn. for contact **lens** copolymer)

IT 5130-24-5, Vinyl chloroformate
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ethylene glycol in monomer prepn. for contact **lens** copolymer)

IT 107-21-1, Ethylene glycol, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with vinyl chloroformate in monomer prepn. for contact **lens** copolymer)

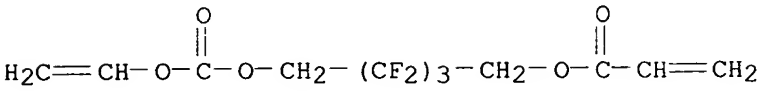
IT **134119-45-2P 134119-46-3P 134119-47-4P 134119-48-5P 134119-49-6P**
RL: THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(prepn. of, for contact **lens**)

RN 134119-45-2 HCAPLUS

CN 2-Propenoic acid, 5-[[(ethenyloxy)carbonyl]oxy]-2,2,3,3,4,4-hexafluoropentyl ester, polymer with 1-ethenyl-2-pyrrolidinone and ethenyl [3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl]carbamate (9CI) (CA INDEX NAME)

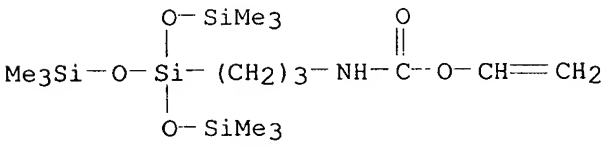
CM 1

CRN 134119-44-1
CMF C11 H10 F6 O5



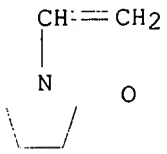
CM 2

CRN 134072-99-4
CMF C15 H37 N O5 Si4



CM 3

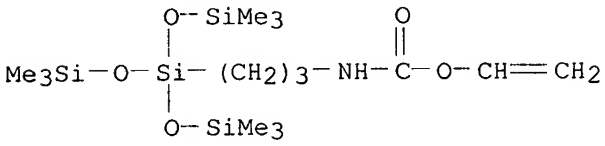
CRN 88-12-0
CMF C6 H9 N O



RN 134119-46-3 HCAPLUS
CN Carbonic acid, ethenyl 2,2,2-trifluoro-1-(trifluoromethyl)ethyl ester, polymer with ethenyl [3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl]carbamate (9CI) (CA INDEX NAME)

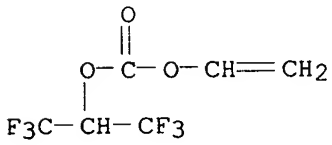
CM 1

CRN 134072-99-4
CMF C15 H37 N O5 Si4



CM 2

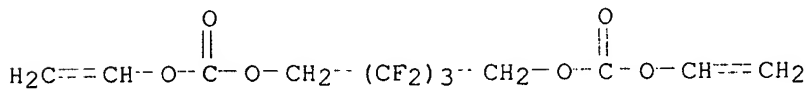
CRN 134072-91-6
CMF C6 H4 F6 O3



RN 134119-47-4 HCAPLUS
CN Carbonic acid, 2,2,3,3,4,4-hexafluoro-1,5-pentanediyl diethenyl ester, polymer with ethenyl [3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl]carbamate (9CI) (CA INDEX NAME)

CM 1

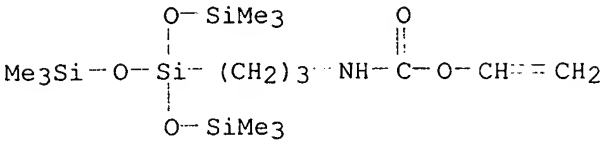
CRN 134073-24-8
CMF C11 H10 F6 O6



CM 2

CRN 134072-99-4

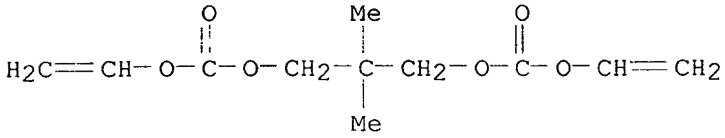
CMF C15 H37 N O5 Si4



RN 134119-48-5 HCAPLUS
CN Carbonic acid, 2,2-dimethyl-1,3-propanediyl diethenyl ester, polymer with ethenyl [3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl]carbamate (9CI) (CA INDEX NAME)

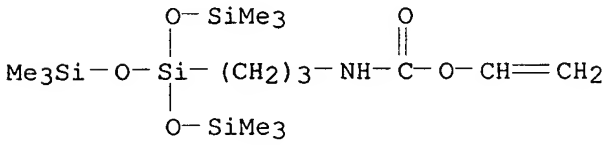
CM 1

CRN 134073-20-4
CMF C11 H16 O6



CM 2

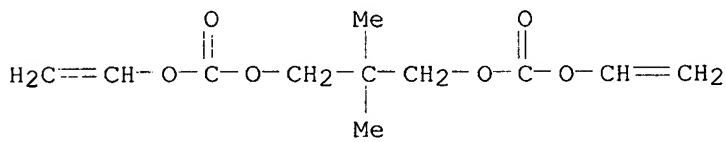
CRN 134072-99-4
CMF C15 H37 N O5 Si4



RN 134119-49-6 HCAPLUS
CN Carbonic acid, 2,2-dimethyl-1,3-propanediyl diethenyl ester, polymer with 1-ethenyl-2-pyrrolidinone and ethenyl [3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl]carbamate (9CI) (CA INDEX NAME)

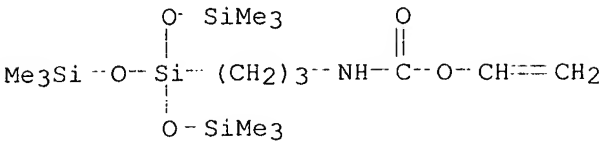
CM 1

CRN 134073-20-4
CMF C11 H16 O6



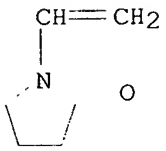
CM 2

CRN 134072-99-4
CMF C15 H37 N O5 Si4



CM 3

CRN 88-12-0
CMF C6 H9 N O



L61 ANSWER 31 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1988:11269 HCAPLUS
DN 108:11269
TI Improved fluorine-containing itaconate siloxane polymeric compositions useful in contact **lenses**
IN Ellis, Edward J.; Ellis, Jeanne Y.
PA Polymer Technology Corp., USA
SO Eur. Pat. Appl., 63 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 219312	A2	19870422	EP 1986-307795	19861009
	EP 219312	A3	19880120		
	EP 219312	B1	19951220		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	US 4686267	A	19870811	US 1985-786846	19851011
	IL 80018	A1	19910512	IL 1986-80018	19860912
	CA 1255425	A1	19890606	CA 1986-518411	19860917
	JP 62092914	A2	19870428	JP 1986-237804	19861006
	JP 02045166	B4	19901008		
	AU 8663620	A1	19870416	AU 1986-63620	19861007
	AU 602659	B2	19901025		
	BR 8604883	A	19870707	BR 1986-4883	19861007
	AT 131938	E	19960115	AT 1986-307795	19861009
	US 4996275	A	19910226	US 1989-449565	19891212
PRAI	US 1985-786846		19851011		
	US 1987-46132		19870504		

US 1988-270796 19881110

AB Oxygen permeable dimensionally stable hydrophilic contact **lens** are prepd. by free radical polymn. of 5-60 wt.% fluorine-contg. H2C:C(CO2Z2)CH2CO2Z1 [I; one of Z1, Z2 contains F; Z1, Z2 = H, (fluoro)alkyl, (fluoro)aralkyl, (fluoro)phenyl, polyethers], and 40-95 wt.% ethylenically unsatd. organosiloxane. HOCH(CF3)2 reacted with itaconic acid to give I [Z1 = Z2 = CH(CF3)2], (II) which (20 parts) was copolymd. with Me methacrylate (12.5) (III), tris(trimethylsiloxy)silylpropyl methacrylate (42) (IV), 1,3-bis(methacryloxypropyl)-1,1,3,3-tetrakis(trimethylsiloxy)disiloxane (13) (V), methacrylic acid (7.5) (VI), tetraethylene glycol dimethacrylate (5) (VII), 2,2'-azobisisobutyronitrile (0.18) and 2,2'-azobisisovaleronitrile (0.06 parts) at 40.degree. for 3 days and 65.degree. for 2 days. The copolymer is irradiated with 3.0 Mrads .gamma. radiation. The material is clear, wettable, and has a Rockwell hardness of 117-118. Lathe cut contact **lenses** have an O2 permeability of DK55 and a **refractive** index of 1.44 at 21.degree.. The **lens** are dimensionally stable, transparent, and exhibit good resistance to protein and lipid deposits.

IC ICM G02B001-04
ICS C08F230-08; C08F222-18

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 37, 38

ST contact **lens** itaconate fluorocarbon oxygen permeable; biocompatibility fluorocarbon itaconate contact **lens**

IT Proteins, biological studies
RL: BIOL (Biological study)
(deposit of, on contact **lenses**, fluorine-contg. itaconate siloxane polymers to avoid)

IT Siloxanes and Silicones, biological studies
RL: BIOL (Biological study)
(polymers contg. fluorocarbon itaconates and, for oxygen permeable hard contact **lenses**)

IT **Lenses**
(contact, contg. fluorocarbons, itaconates, and siloxanes, oxygen permeability and protein deposition resistance of)

IT 920-66-1, 1,1,1,3,3,3-Hexafluoro-2-propanol
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of, with itaconic acid, for use in contact **lenses**)

IT 79-10-7D, esters 79-41-4D, esters 97-65-4D, esters
RL: BIOL (Biological study)
(hardness modifying agent, for siloxane fluorocarbon contact **lens**)

IT 7782-41-4D, itaconate esters contg.
RL: BIOL (Biological study)
(oxygen permeable hard contact **lenses** contg.)

IT 7782-44-7, biological studies
RL: PRP (Properties)
(permeability of, in contact **lenses** of fluorine-contg. itaconate siloxane polymers)

IT 17096-07-0 80722-63-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymn. of, for oxygen permeable dimensionally stable hydrophilic contact **lenses**)

IT **111866-16-1P 111866-17-2P 111866-18-3P**
111876-65-4P 111876-66-5P
RL: **PREP (Preparation)**
(prepn. of, for use in oxygen permeable dimensionally stable hydrophilic contact **lens**)

IT 98452-82-5P

RL: PREP (Preparation)
(prepn., polymn., and use of, in oxygen permeable contact **lenses**)

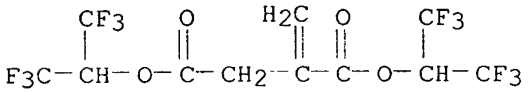
IT **111866-16-1P 111866-17-2P 111866-18-3P**
111876-65-4P 111876-66-5P
RL: **PREP (Preparation)**
(prepn. of, for use in oxygen permeable dimensionally stable hydrophilic contact **lens**)

RN 111866-16-1 HCAPLUS

CN Butanedioic acid, methylene-, bis[2,2,2-trifluoro-1-(trifluoromethyl)ethyl] ester, polymer with methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, oxybis(2,1-ethanediyloxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), [1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-disiloxanediyl]di-3,1-propanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

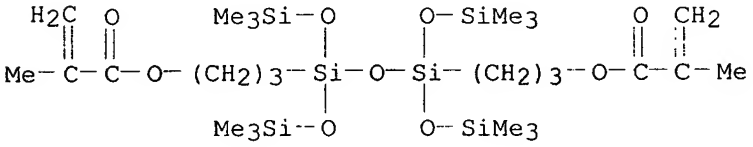
CM 1

CRN 98452-82-5
CMF C11 H6 F12 O4



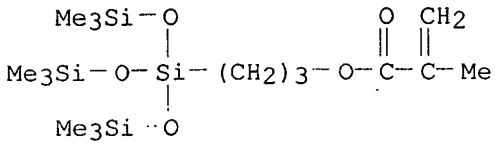
CM 2

CRN 80722-63-0
CMF C26 H58 O9 Si6



CM 3

CRN 17096-07-0
CMF C16 H38 O5 Si4



CM 4

CRN 109-17-1

CMF C16 H26 O7

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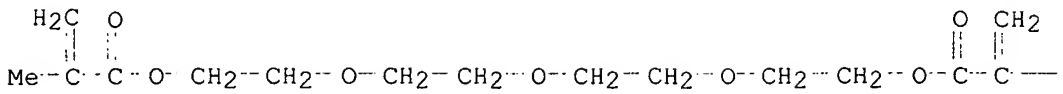

PAGE 1-B

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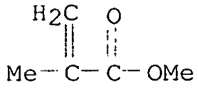
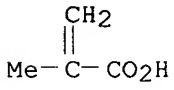
CM 5

CRN 80-62-6
CMF C5 H8 O2



CM 6

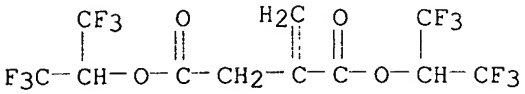
CRN 79-41-4
CMF C4 H6 O2



RN 111866-17-2 HCAPLUS
CN Butanedioic acid, methylene-, bis[2,2,2-trifluoro-1-(trifluoromethyl)ethyl] ester, polymer with 1-ethenyl-2-pyrrolidinone, 2-methyl-2-propenoic acid, oxybis(2,1-ethanediyloxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), [1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-disiloxanediyl]di-3,1-propanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

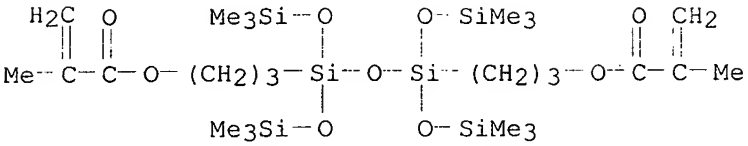
CM 1

CRN 98452-82-5
CMF C11 H6 F12 O4



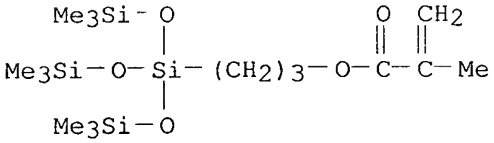
CM 2

CRN 80722-63-0
CMF C26 H58 O9 Si6



CM 3

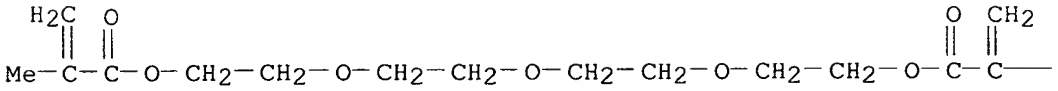
CRN 17096-07-0
CMF C16 H38 O5 Si4



CM 4

CRN 109-17-1
CMF C16 H26 O7

PAGE 1-A



PAGE 1-B

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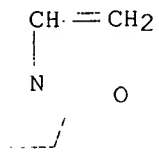
CM 5

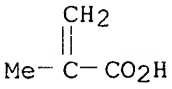
CRN 88-12-0

CMF C6 H9 N O



CM 6

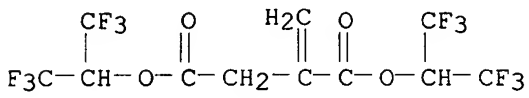
CRN 79-41-4
CMF C4 H6 O2



RN 111866-18-3 HCAPLUS
CN Butanedioic acid, methylene-, bis[2,2,2-trifluoro-1-(trifluoromethyl)ethyl] ester, polymer with ethenylbenzene, 2-naphthalenyl 2-methyl-2-propenoate, oxybis(2,1-ethanediyloxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), [1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-disiloxanediyl]di-3,1-propanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

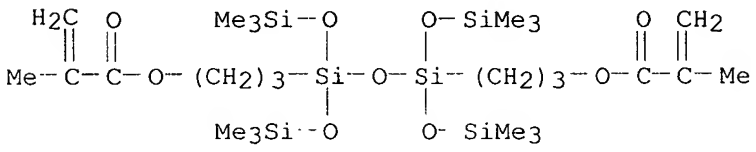
CM 1

CRN 98452-82-5
CMF C11 H6 F12 O4



CM 2

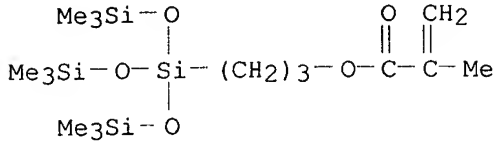
CRN 80722-63-0
CMF C26 H58 O9 Si6



CM 3

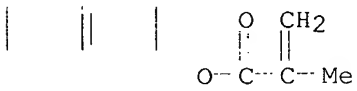
CRN 17096-07-0

CMF C16 H38 O5 Si4



CM 4

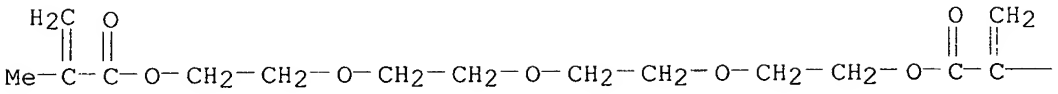
CRN 10475-46-4
CMF C14 H12 O2



CM 5

CRN 109-17-1
CMF C16 H26 O7

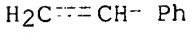
PAGE 1-A



PAGE 1-B

CM 6

CRN 100-42-5
CMF C8 H8

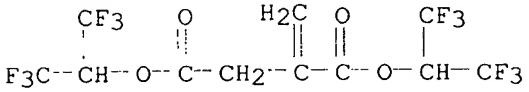


RN 111876-65-4 HCAPLUS
CN Butanedioic acid, methylene-, bis[2,2,2-trifluoro-1-(trifluoromethyl)ethyl] ester, polymer with 1-ethenyl-2-pyrrolidinone, methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, oxybis(2,1-ethanediyloxy-2,1-ethanediyl) bis(2-methyl-2-propenoate),

[1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-disiloxanediyl]di-3,1-propanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

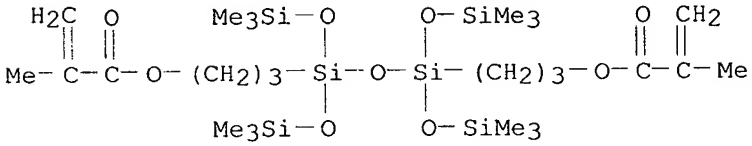
CM 1

CRN 98452-82-5
CMF C11 H6 F12 O4



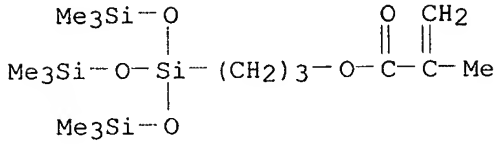
CM 2

CRN 80722-63-0
CMF C26 H58 O9 Si6



CM 3

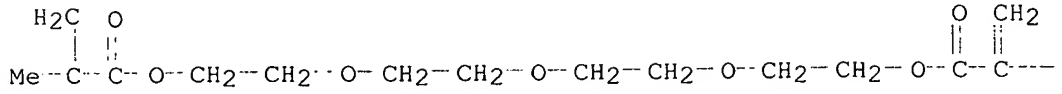
CRN 17096-07-0
CMF C16 H38 O5 Si4



CM 4

CRN 109-17-1
CMF C16 H26 O7

PAGE 1-A

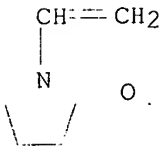


PAGE 1-B

-Me

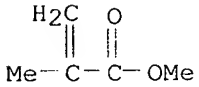
CM 5

CRN 88-12-0
CMF C6 H9 N O



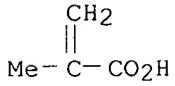
CM 6

CRN 80-62-6
CMF C5 H8 O2



CM 7

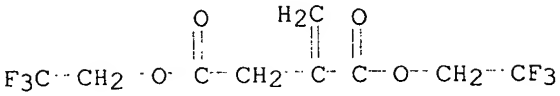
CRN 79-41-4
CMF C4 H6 O2



RN 111876-66-5 HCAPLUS
CN Butanedioic acid, methylene-, bis(2,2,2-trifluoroethyl) ester, polymer with 1-ethenyl-2-pyrrolidinone, 2-methyl-2-propenoic acid, oxybis(2,1-ethanediyloxy-2,1-ethanediyl) bis(2-methyl-2-propenoate), [1,1,3,3-tetrakis[(trimethylsilyl)oxy]-1,3-disiloxanediyl]di-3,1-propanediyl bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

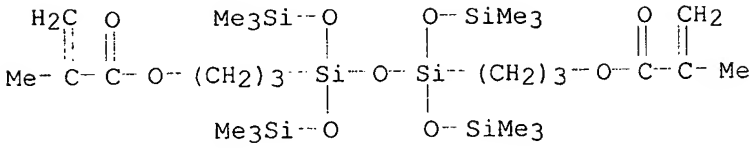
CM 1

CRN 104534-96-5
CMF C9 H8 F6 O4



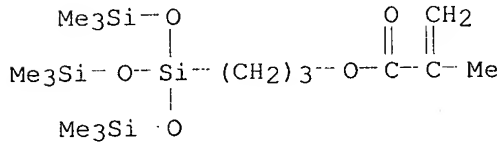
CM 2

CRN 80722-63-0
CMF C26 H58 O9 Si6



CM 3

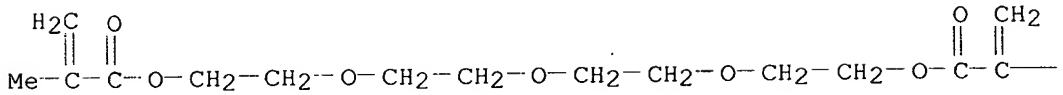
CRN 17096-07-0
CMF C16 H38 O5 Si4



CM 4

CRN 109-17-1
CMF C16 H26 O7

PAGE 1-A



PAGE 1-B

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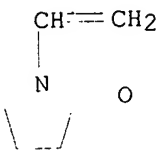
CM 5

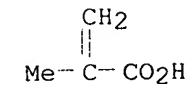
CRN 88-12-0

CMF C6 H9 N O



CM 6

CRN 79-41-4
CMF C4 H6 O2



L61 ANSWER 32 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1987:521137 HCAPLUS
DN 107:121137
TI Polymers inhibiting protein binding for use as contact **lens**
IN Falcetta, Joseph J.; Kunzler, Wilhelm F.
PA Oculus Contact Lens Co., USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

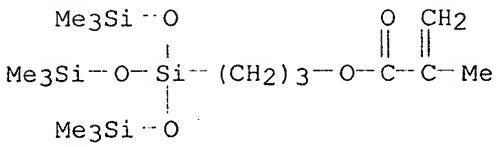
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4645811	A	19870224	US 1984-595580	19840402

AB The title copolymers are prepd. from an alkyl acrylate, an organosiloxane ester and a protein binding-inhibiting wetting mixt. of N-(1,1-dimethyl-3-oxobutyl)acrylamide and .gtoreq.1 acids selected from the group consisting of acrylic and methacrylic acid. Acrylic acid (2.0)-N-(1,1-dimethyl-3-oxobutyl)acrylamide(9.6)-ethylens(trimethylsilyl)siloxane(28.4 parts by wt.) copolymer was prepd. The copolymer was optically homogeneous, showed 0 permeability, was dimensionally stable, had an index of **refraction** of nD 1.5, had a light transmission of 98%, had a hardness of .apprx.D/96, had a wetting angle of .apprx.20.degree., and a proteinaceous material binding rate of .apprx.0.8%.
IC ICM C08F030-08
NCL 526279000
CC 63-7 (Pharmaceuticals)
ST contact **lens** acrylate organosiloxane protein binding; siloxane acrylate contact **lens** protein binding; acrylamide methyloxobutyl protein binding inhibition
IT Proteins, biological studies
RL: BIOL (Biological study)
(binding of, by contact **lenses**, inhibition of)
IT Acrylic polymers, biological studies
RL: BIOL (Biological study)
(contact **lenses** contg. organosiloxanes and, protein binding

inhibition in)
IT Siloxanes and Silicones, biological studies
RL: DEV (Device component use); USES (Uses)
(acrylic, for contact **lenses**, protein binding-inhibiting agent in)
IT **Lenses**
(contact, acrylic copolymers with organosiloxanes as, protein binding-inhibiting agent in)
IT Acrylic polymers, biological studies
RL: DEV (Device component use); USES (Uses)
(siloxane-, for contact **lenses**, protein binding-inhibiting agent in)
IT **91524-13-9P 110226-45-4P**
RL: **PREP (Preparation)**
(prepn. of, as contact **lens**, protein binding inhibition in)
IT **91524-13-9P 110226-45-4P**
RL: **PREP (Preparation)**
(prepn. of, as contact **lens**, protein binding inhibition in)
RN 91524-13-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, 1,2-ethanediyl bis(2-methyl-2-propenoate), methyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

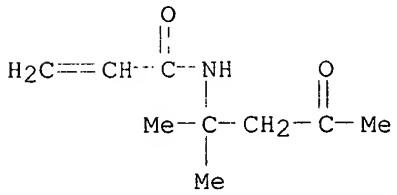
CM 1

CRN 17096-07-0
CMF C16 H38 O5 Si4



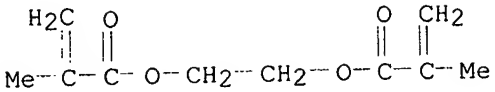
CM 2

CRN 2873-97-4
CMF C9 H15 N O2



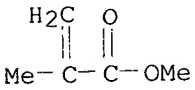
CM 3

CRN 97-90-5
CMF C10 H14 O4



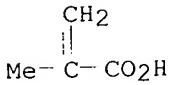
CM 4

CRN 80-62-6
CMF C5 H8 O2



CM 5

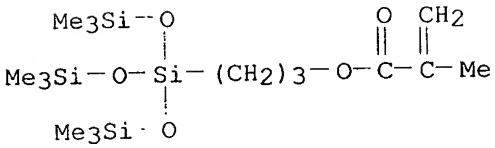
CRN 79-41-4
CMF C4 H6 O2



RN 110226-45-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with N-(1,1-dimethyl-3-oxobutyl)-2-propenamide, methyl 2-methyl-2-propenoate, 2-propenoic acid and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

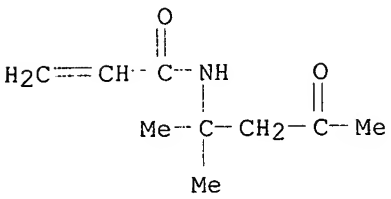
CM 1

CRN 17096-07-0
CMF C16 H38 O5 Si4



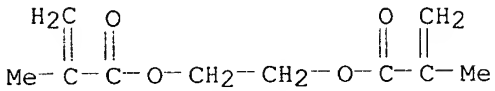
CM 2

CRN 2873-97-4
CMF C9 H15 N O2



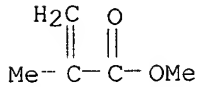
CM 3

CRN 97-90-5
CMF C10 H14 O4



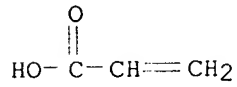
CM 4

CRN 80-62-6
CMF C5 H8 O2



CM 5

CRN 79-10-7
CMF C3 H4 O2



L61 ANSWER 33 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1984:443642 HCAPLUS
DN 101:43642
TI Acrylic organosilicon polymers for contact **lenses** or prosthetics
IN Whitford, Maurice John
PA Contact Lens (Mfg.) Ltd., UK
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 8400969 A1 19840315 WO 1983-GB213 19830830
W: AU, DK, FI, JP, NO, US
RW: AT, BE, CH, DE, FR, LU, NL, SE
AU 8319443 A1 19840329 AU 1983-19443 19830830
GB 2127422 A1 19840411 GB 1983-23215 19830830
GB 2127422 B2 19870225
EP 116638 A1 19840829 EP 1983-902999 19830830
R: BE, DE, FR, NL, SE
DK 8402141 A 19840427 DK 1984-2141 19840427
PRAI GB 1982-24630 19820827
WO 1983-GB213 19830830

AB A dimensionally stable organosilicon polymer contg. hydrolyzable functional groups is prepd. from copolymn. of acrylic monomers with vinylsilanes and/or vinylsiloxanes. The polymer has a renewable wettable surface and it useful for making contact **lenses** or prosthetics. Thus, vinyl methyl siloxane 17.5, Me methacrylate 54, .gamma.-methacryloxypropyltriethoxysilane 22.5, ABN 0.1, and allyl methacrylate 10 parts were polymd. to give a transparent polymer with a **refractive** index of 1.45, a water uptake of 0.672% and a wetting angle of 62.degree..

IC C08F230-08; A61L017-00; B29D011-00; C08F299-08

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 35

ST acrylate siloxane contact **lens** prosthetic

IT Acrylic polymers, compounds
RL: PREP (Preparation)
(reaction products with methacryloxyalkylalkoxysilanes, prepn. of, for contact **lenses** and prosthetics)

IT Siloxanes and Silicones, compounds
RL: PREP (Preparation)
(Me vinylmethyl, polymers with methacryloxyalkylalkoxysilanes and acrylates, prepn. of, for contact **lenses** and prosthetics)

IT Siloxanes and Silicones, compounds
RL: PREP (Preparation)
(acrylic, reaction products with methacryloxyalkylalkoxysilanes, prepn. of, for contact **lenses** and prosthetics)

IT **Lenses**
(contact, vinylsiloxane-acrylate polymers for)

IT Acrylic polymers, compounds
RL: PREP (Preparation)
(siloxane-, reaction products with methacryloxyalkylalkoxysilanes, prepn. of, for contact **lenses** and prosthetics)

IT 80-62-6DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 96-05-9DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 97-63-2DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 97-90-5DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 109-16-0DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 142-09-6DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 2530-85-0DP, polymers with acrylates and vinylsiloxanes 2627-95-4DP, polymers with methacryloxypropylalkoxysilanes and vinylsiloxanes 21142-29-0DP, polymers with acrylates and vinyl siloxanes **26936-30-1P 81503-75-5P 91034-27-4P**
RL: **PREP (Preparation)**
(prepn. of, for contact **lenses** and prosthetics)

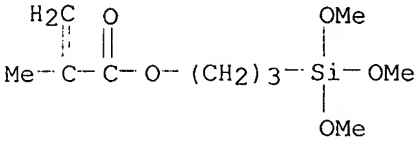
IT **26936-30-1P 81503-75-5P 91034-27-4P**
RL: **PREP (Preparation)**
(prepn. of, for contact **lenses** and prosthetics)

RN 26936-30-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

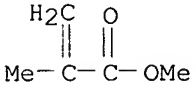
CM 1

CRN 2530-85-0
CMF C10 H20 O5 Si



CM 2

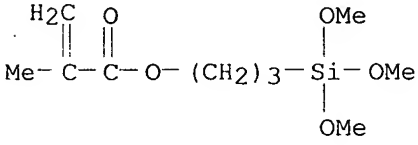
CRN 80-62-6
CMF C5 H8 O2



RN 81503-75-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with methyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

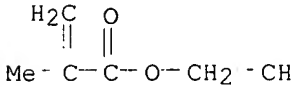
CM 1

CRN 2530-85-0
CMF C10 H20 O5 Si



CM 2

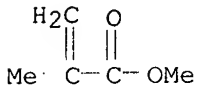
CRN 868-77-9
CMF C6 H10 O3



CM 3

CRN 80-62-6

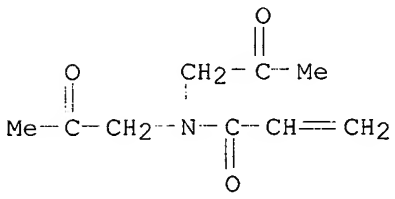
CMF C5 H8 O2



RN 91034-27-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with N,N-bis(2-oxopropyl)-2-propenamide, 2-propenyl 2-methyl-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

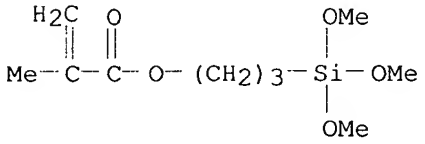
CM 1

CRN 77173-78-5
CMF C9 H13 N O3



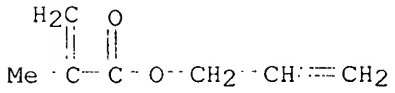
CM 2

CRN 2530-85-0
CMF C10 H20 O5 Si



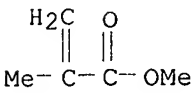
CM 3

CRN 96-05-9
CMF C7 H10 O2



CM 4

CRN 80-62-6
CMF C5 H8 O2



L61 ANSWER 34 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1983:493785 HCAPLUS
DN 99:93785
TI Silicic acid heteropolycondensate and its use in manufacturing contact **lenses**
IN Schmidt, Helmut; Philipp, Gottfried; Kreiner, Christine F.
PA Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung e.V., Fed. Rep. Ger.; Thilo, Dr., und Co. Contactlinsen G.m.b.H. Menicon-Deutschland-Vertrieb
SO Ger. Offen., 21 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

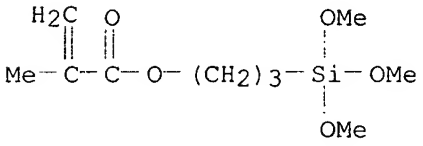
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3143820	A1	19830511	DE 1981-3143820	19811104
	EP 78548	A2	19830511	EP 1982-110167	19821104
	EP 78548	A3	19841107		
	EP 78548	B1	19870121		
	R: AT, CH, DE, FR, GB, IT, LI				
	AT 25095	E	19870215	AT 1982-110167	19821104
PRAI	DE 1981-3143820		19811104		
	EP 1982-110167		19821104		

AB Contact **lenses** are prepd. from: 5-20 mol% of MR4, where M is Ti or Zr and R is halogen, hydroxy, alkoxy, acyloxy, or a chelate ligand; 60-95 mol% Rm2(R3Y)nSiX(4-m-n), where R2 is alkyl, alkenyl aryl, arylalkyl, alkylaryl, arylalkenyl, or alkenylaryl, R3 is alkylene, phenylene, alkylphenylene, or alkenylene, and can contain O, S, or NH2 groups, X is H, halogen, hydroxy, alkoxy, acyloxy or NR12 (R1 is H and/or alkyl), Y is a hydrophilic residue, m is 0, 1, or 2, and n is 1, 2, or 3, and m + n is 1-3; 0-30 mol% Rn2SiX4-n; and 0-30 mol% of a low volatility Group Ia-Va or IVb or Vb element, except not Ti or Zr, oxide that is sol. in the reaction medium or a compd. of such element that forms an oxide in the reaction medium. Thus, 22.44 g (3-glycidoxypropyl)trimethoxysilane and 0.98 g Ti(OEt)4 [3087-36-3] were refluxed in 15 mL anhyd. EtOH, refluxed with periodic addns. of anhyd. in HCl in MeOH for 90 min, evapd. at 70.degree., and the residue was mixed with 7.2 mL H2O. The viscous-solid emulsion was warmed to give a clear soln., which was concd., dried in a polypropylene tube at 130.degree. for 24, removed from the tube, dried further at 130.degree., and cut and polished with diamond dust to give **lenses** with a **refractive** index of 1.495.
IC C08G077-58; B29D011-00; G02B001-04; G02C007-04
CC 63-7 (Pharmaceuticals)
ST siloxane contact **lens**; glycidylpropyltrimethoxysilane polymer; titanate silicone polymn
IT Siloxanes and Silicones, biological studies
RL: PREP (Preparation)
(for contact **lenses**, prepn. of)
IT **Lenses**
(contact, silicones polymn. for, with tetraalkyl titanates and zirconates)
IT 1071-76-7 3087-36-3

RL: CAT (Catalyst use); USES (Uses)
(catalyst, for silicone polymn., for contact **lenses**)
IT 56325-93-0P **66451-46-5P** 86828-93-5P
RL: THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(prepn. of, for contact **lenses**)
IT **66451-46-5P**
RL: THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(prepn. of, for contact **lenses**)
RN 66451-46-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

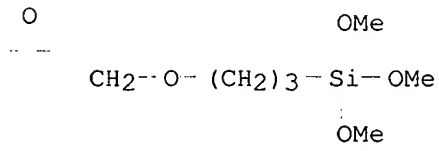
CM 1

CRN 2530-85-0
CMF C10 H20 O5 Si



CM 2

CRN 2530-83-8
CMF C9 H20 O5 Si



L61 ANSWER 35 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1982:205461 HCAPLUS
DN 96:205461
TI Ionic ophthalmic solutions
IN Ellis, Edward J.; **Salamone, Joseph C.**
PA Polymer Technol. Corp., USA
SO U.S., 9 pp. Cont.-in-part of U.S. Ser. No. 38,703, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

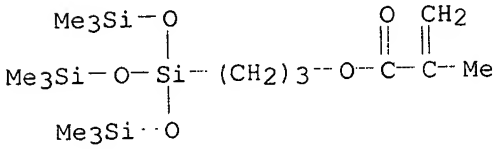
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4321261	A	19820323	US 1979-51961	19790625
	US 4436730	A	19840313	US 1981-319111	19811109
PRAI	US 1978-867136		19780105		
	US 1979-38703		19790514		
	US 1979-51961		19790625		

AB A contact lens soln. useful for wetting, soaking and lubricating hard contact lenses, esp. those carrying an ionic charge, contains an ionic polymer (0.001-10% by wt.) of cationic or anionic charge that interacts with an oppositely charged surface of the contact lens forming an interfacial polyelectrolyte complex. This complex forms a hydrogel at the lens surface which absorbs water, has good water retention and is compatible with the physiol. structures of the eye. A durable cushion is formed which provides long lasting comfort to the eye. Thus, a wetting and soaking soln. was prepd. contg. hydroxyethyl cellulose [9004-62-0] 0.25, JR-400 [53568-66-4] 0.1, benzalkonium chloride 0.005, NaCl 0.75, KCl 0.2 and tri-Na-EDTA 0.1% (by wt.) and distd. water balance to 100. This soln. was used by a no. of patients wearing hard contact lenses prepd. from 5% methacrylic acid copolymer. All the patients showed a significant improvement in their lens wearing comfort and enhanced ability to wear their lenses for a longer time.

IC A61K031-72
NCL 424180000
CC 63-7 (Pharmaceuticals)
IT 25135-81-3 50657-50-6 **72638-32-5 81853-47-6**
RL: BIOL (Biological study)
(contact lenses, wetting of, by formation of interfacial polyelectrolyte complexes with cationic celluloses)
IT **72638-32-5 81853-47-6**
RL: BIOL (Biological study)
(contact lenses, wetting of, by formation of interfacial polyelectrolyte complexes with cationic celluloses)
RN 72638-32-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with methyl 2-methyl-2-propenoate, oxybis(2,1-ethanediyloxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

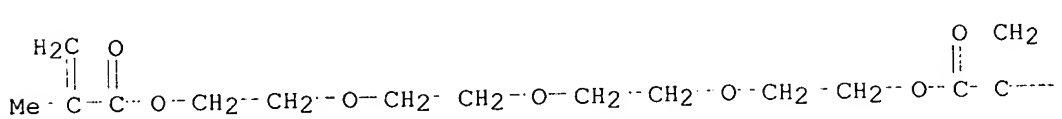
CRN 17096-07-0
CMF C16 H38 O5 Si4

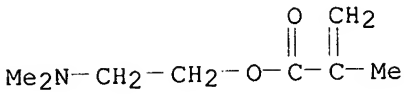


CM 2

CRN 109-17-1
CMF C16 H26 O7

PAGE 1-A

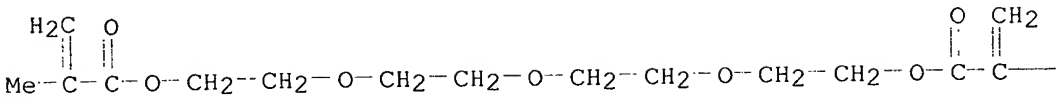




CM 3

CRN 109-17-1
CMF C16 H26 O7

PAGE 1-A

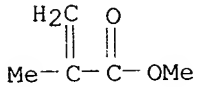


PAGE 1-B

-- Me

CM 4

CRN 80-62-6
CMF C5 H8 O2



L61 ANSWER 36 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1980:82457 HCAPLUS
DN 92:82457
TI Hydrophilic contact lens coating
IN Ellis, Edward Joseph; **Salamone, Joseph Charles**
PA Polymer Technology Corp., USA
SO Brit. UK Pat. Appl., 9 pp.
CODEN: BAXXDU
DT Patent
LA English
FAN.CNT 2

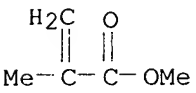
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2012070	A	19790718	GB 1978-49002	19781219
	CA 1152259	A1	19830823	CA 1978-318352	19781221
	DE 2900270	A1	19790719	DE 1979-2900270	19790104
	AU 7943169	A1	19790712	AU 1979-43169	19790105
	AU 527065	B2	19830217		
	FR 2414207	A1	19790803	FR 1979-266	19790105

PAGE 1-B

— Me

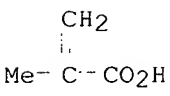
CM 3

CRN 80-62-6
CMF C5 H8 O2



CM 4

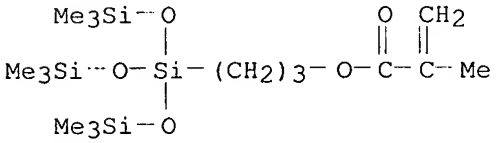
CRN 79-41-4
CMF C4 H6 O2



RN 72638-33-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with methyl 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

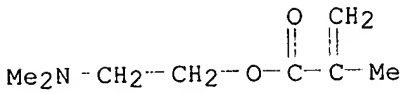
CM 1

CRN 17096-07-0
CMF C16 H38 O5 Si4



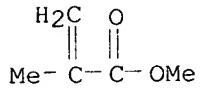
CM 2

CRN 2867-47-2
CMF C8 H15 N O2



CM 3

CRN 80-62-6
CMF C5 H8 O2



L61 ANSWER 37 OF 37 HCAPLUS COPYRIGHT 2002 ACS
AN 1979:444546 HCAPLUS
DN 91:44546
TI Silicone-containing hard contact lens material
IN Ellis, Edward J.; Salamone, Joseph C.
PA Polymer Technology Corp., USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4152508	A	19790501	US 1978-878163	19780215
	CA 1102485	A1	19810602	CA 1978-315602	19781031
	DE 2902324	A1	19790823	DE 1979-2902324	19790122
	DE 2902324	C2	19870820		
	FR 2417782	A1	19790914	FR 1979-2244	19790129
	FR 2417782	B1	19850719		
	GB 2014591	A	19790830	GB 1979-3222	19790130
	GB 2014591	B2	19820616		
	AU 7943947	A1	19790823	AU 1979-43947	19790205
	AU 520158	B2	19820114		
	JP 54118455	A2	19790913	JP 1979-16718	19790215
	JP 02019925	B4	19900507		
	JP 02147613	A2	19900606	JP 1989-263771	19891009
	JP 03040060	B4	19910617		
PRAI	US 1978-878163		19780215		

AB Contact lens compns. which have high O permeability, good hardness and ready machinability with good dimensional stability comprise a copolymer of a siloxanyl alkyl ester monomer, an itaconate ester, an acrylate ester and, preferably, a crosslinking agent and hydrophilic monomer. A hard contact lens polymer prepd. from di-Me itaconate 22.7, Me methacrylate 22.7, methacryloxyoxypropyl tris(trimethylsilyl)siloxane 45.4, methacrylic acid 4.5, tetraethylene glycol dimethacrylate 4.5 with AIBN initiator 0.2 wt.% showed an O permeability of 198 cm3/cm2 s cm Hg .times. 1010 compared to 1, 22, and 35 for poly(Me methacrylate), polycarbonate; and polystyrene, resp.

IC C08F030-08; C08F230-08; C08F004-04; B29D011-00
NCL 526279000
CC 63-7 (Pharmaceuticals)

IT **70739-71-8P 70739-72-9P 70739-73-0P**
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, for contact lens)

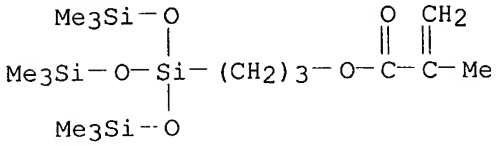
IT **70739-71-8P 70739-72-9P 70739-73-0P**
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, for contact lens)

RN 70739-71-8 HCAPLUS

CN Butanedioic acid, methylene-, dimethyl ester, polymer with methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, oxybis(2,1-ethanediyloxy-2,1-ethanediyl) bis(2-methyl-2-propenoate) and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

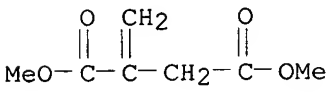
CM 1

CRN 17096-07-0
CMF C16 H38 O5 Si4



CM 2

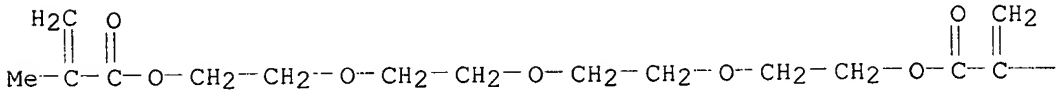
CRN 617-52-7
CMF C7 H10 O4



CM 3

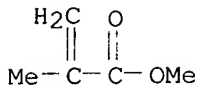
CRN 109-17-1
CMF C16 H26 O7

PAGE 1-A



CM 4

CRN 80-62-6
CMF C5 H8 O2



=>

also 10/000136

=> file reg
FILE 'REGISTRY' ENTERED AT 14:55:46 ON 23 DEC 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 DEC 2002 HIGHEST RN 477520-59-5
DICTIONARY FILE UPDATES: 22 DEC 2002 HIGHEST RN 477520-59-5

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> file hcaplus
FILE 'HCAPLUS' ENTERED AT 14:55:51 ON 23 DEC 2002
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FILE COVERS 1907 - 23 Dec 2002 VOL 137 ISS 26
FILE LAST UPDATED: 22 Dec 2002 (20021222/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d que
L7 1 SEA FILE=REGISTRY ABB=ON 7351-61-3 starting material Claim #5
L8 93 SEA FILE=HCAPLUS ABB=ON L7
L9 14 SEA FILE=HCAPLUS ABB=ON L8 AND (LENS? OR REFRACT?)
L10 40 SEA FILE=HCAPLUS ABB=ON L7(L)RCT/RL
L11 11 SEA FILE=HCAPLUS ABB=ON L9 AND L10

=> d l11 bib abs hitind hitstr 1-11

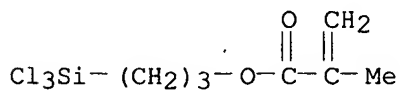
L11 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:346243 HCAPLUS
DN 133:155352
TI Low modulus fluorosiloxane-based hydrogels for contact **lens** application
AU Kunzler, J.; Ozark, R.
CS Department of Polymer Development, Bausch and Lomb Inc., Rochester, NY, 14692-0450, USA
SO ACS Symposium Series (2000), 729(Silicones and Silicone-Modified Materials), 296-307
CODEN: ACSMC8; ISSN: 0097-6156
PB American Chemical Society
DT Journal
LA English
AB Novel methacrylate functionalized fluorinated-siloxy silanes were evaluated for potential use in hydrogels for extended wear contact **lens** application: methacryloyloxypropyl-tris(3-(2,2,3,3,4,4,5,5-octafluoro-pentoxy)propyldimethylsiloxy)silane (Tris(F)), methacryloyloxypropyl-di(3-(2,2,3,3,4,4,5,5-octafluoropentoxy)propyldimeth yls iloxy)methylsilane (Di(F)), and 1-(methacryloyloxypropyl)-3-(3-(2,2,3,3,4,4,5,5-octafluoropentoxy)propyl)tetr a-methyldisiloxane (Mono(F)). The methacrylate fluorinated-silanes were synthesized by the hydrosilation reaction of methacrylate capped hydrido-siloxy silanes with allyloxyoctafluoropentane. An alternate synthetic procedure for Mono(F) was developed. Radical bulk polymn. of the methacrylate functionalized fluorinated-siloxy silanes with hydrophilic monomers, such as dimethylacrylamide, resulted in transparent hydrogels possessing a wide range of water contents, high oxygen permeability, and a low modulus of elasticity.
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 35
ST fluoro siloxane hydrogel contact **lens**
IT Contact **lenses**
Elasticity
(low modulus fluorosiloxane-based hydrogels for contact **lens** application)
IT Fluoropolymers, biological studies
Fluoropolymers, biological studies
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(perfluoroalkyl polysiloxane-; low modulus fluorosiloxane-based hydrogels for contact **lens** application)
IT Polysiloxanes, biological studies
Polysiloxanes, biological studies
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(perfluoroalkyl; low modulus fluorosiloxane-based hydrogels for contact **lens** application)
IT 920-46-7, Methacryloyl chloride 1066-35-9, Dimethylchlorosilane 3108-07-4 3277-26-7 **7351-61-3** 18146-00-4, Allyloxytrimethylsilane
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(low modulus fluorosiloxane-based hydrogels for contact **lens** application)
IT 17096-08-1P 104104-90-7P 159633-66-6P 192005-21-3P 192005-22-4P 192005-23-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(low modulus fluorosiloxane-based hydrogels for contact **lens** application)

IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(low modulus fluorosiloxane-based hydrogels for contact **lens** application)

RN 7351-61-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2002 ACS

AN 1997:571276 HCAPLUS

DN 127:298797

TI Organosiloxane-based acrylic polymer **lens** materials for eyes and ophthalmic **lenses** from them

IN Fujitani, Hiroshi; Komura, Ikuo; Nagase, Hiroshi; Aoyagi, Takao; Akimoto, Michiko

PA Kuraray Co., Ltd., Japan; Sagami Chemical Research Center

SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09221530	A2	19970826	JP 1996-54046	19960216

AB The **lens** materials are obtained by copolymg. org. monomers contg. .gtoreq.5 wt.% pyrrolidone ring-contg. organosiloxane monomer components. The above materials are esp. suitable for contact **lenses**. A copolymer from 3-[1,1-bis[[dimethyl[(1-methyl-2-oxo-3-pyrrolidinyl)methyl]silyl]oxy]-3 ,3-dimethyl-3-[(1-methyl-2-oxo-3-pyrrolidinyl)methyl]disiloxanyl]propyl-2-propenoic acid Me ester , 2,2,2-trifluoroethyl methacrylate, Me methacrylate, and ethylene glycol dimethacrylate showed high O permeability, contact angle, and good transparency.

IC ICM C08F299-08
ICS A61L027-00; C08F030-08; C08G077-26; G02B001-04; G02C007-04

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 35, 38

ST pyrrolidinylsiloxanylpropenoate methacrylate copolymer contact **lens**

IT Polysiloxanes, biological studies
RL: DEV (Device component use); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(acrylic; ophthalmic **lenses** from pyrrolidinylsiloxanylpropenoate-methacrylate copolymers)

IT Contact **lenses**
Intraocular **lenses**
(ophthalmic **lenses** from pyrrolidinylsiloxanylpropenoate-methacrylate copolymers)

IT 195967-21-6P 195967-24-9P 195967-27-2DP, ether with

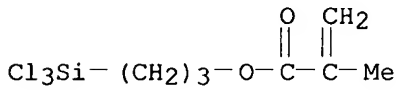
1-methyl-3-[(hydroxydimethylsilyl)methyl]-2-pyrrolidone
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(ophthalmic **lenses** from pyrrolidinylsiloxanylpropenoate-methacrylate copolymers)

IT **7351-61-3P**, 3-Methacryloyloxypropyltrichlorosilane 172413-69-3P 172413-70-6P 191356-04-4P
RL: IMF (Industrial manufacture); **RCT (Reactant)**; PREP (Preparation); RACT (Reactant or reagent)
(ophthalmic **lenses** from pyrrolidinylsiloxanylpropenoate-methacrylate copolymers)

IT 541-05-9, Hexamethylcyclotrisiloxane 872-50-4, 1-Methyl-2-pyrrolidone, reactions 3144-74-9, Chloromethyldimethylsilane 24636-31-5, 3-Methacryloyloxypropyldimethylchlorosilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(ophthalmic **lenses** from pyrrolidinylsiloxanylpropenoate-methacrylate copolymers)

IT **7351-61-3P**, 3-Methacryloyloxypropyltrichlorosilane
RL: IMF (Industrial manufacture); **RCT (Reactant)**; PREP (Preparation); RACT (Reactant or reagent)
(ophthalmic **lenses** from pyrrolidinylsiloxanylpropenoate-methacrylate copolymers)

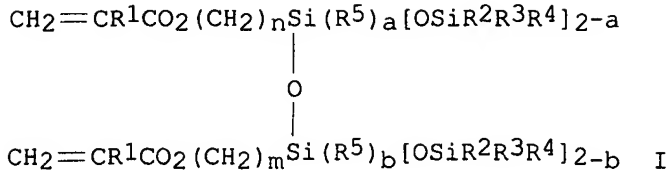
RN 7351-61-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1996:20130 HCAPLUS
DN 124:56298
TI Preparation of siloxanes as crosslinking agents for methacrylic resin for contact **lens**
IN Ichinohe, Seiji; Yamazaki, Toshio; Suzuki, Nobuyuki
PA Shinetsu Chem Ind Co, Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 07215984	A2	19950815	JP 1994-24727	19940127
JP 2880903	B2	19990412		

OS CASREACT 124:56298; MARPAT 124:56298
GI



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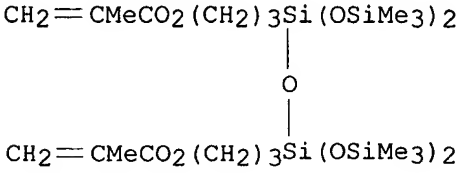


II

AB The title compds. I [R1 = H, methyl; R2 - R4 = monovalent org. moiety, etc.; R5 = monovalent org. moiety; m, n = 1 - 12; a, b = 0 or 1] are prepd. from the appropriate silanol derivs. Thus, CH2:CMeCO2(CH2)3Si(OH)(OSiMe3)2 (purity 97%) 105 g was added to a mixt. of .gamma.-methacryloyloxypropyltrichlorosilane 78.5 g, tert-butylhydroxytoluene 0.08 g, and triethylamine 95.5 g in toluene 350 g. The resulting mixt. was heated for 2 h at 60.degree.. Me3SiOH 72 g was then added, and the reaction mixt. was heated for 5 h at 60.degree. to give the title compd. II (purity 93%).

IC ICM C07F007-08

CC 29-6 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 35, 63

ST siloxane prepn crosslinker contact **lens** resin; silylation silanol

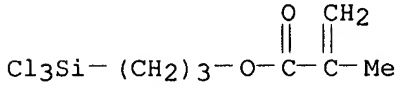
IT 80722-63-0P 172152-21-5P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of siloxanes as crosslinking agents for methacrylic resin for contact **lens**)

IT 75-77-4, Trimethylchlorosilane, reactions 597-52-4, Triethylsilanol 1066-40-6, Trimethylsilanol **7351-61-3**, .gamma.-Methacryloyloxypropyltrichlorosilane 83692-44-8
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(prepn. of siloxanes as crosslinking agents for methacrylic resin for contact **lens**)

IT **7351-61-3**, .gamma.-Methacryloyloxypropyltrichlorosilane
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(prepn. of siloxanes as crosslinking agents for methacrylic resin for contact **lens**)

RN 7351-61-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:246558 HCAPLUS
DN 122:11454
TI Vinyl- and acryl-functional siloxane monomers having polar fluorinated side chains for manufacture of hydrogels
IN Kunzler, Jay; Ozark, Richard
PA Bausch and Lomb Inc, USA
SO U.S., 9 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5321108	A	19940614	US 1993-17056	19930212
	US 5387662	A	19950207	US 1994-183220	19940118
	WO 9418253	A1	19940818	WO 1994-US1015	19940128
	W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9461670	A1	19940829	AU 1994-61670	19940128
	AU 669058	B2	19960523		
	EP 683799	A1	19951129	EP 1994-908661	19940128
	EP 683799	B1	19971229		
	R: DE, ES, FR, GB, IE, IT				
	BR 9405839	A	19951205	BR 1994-5839	19940128
	CN 1117739	A	19960228	CN 1994-191165	19940128
	JP 08506841	T2	19960723	JP 1994-518112	19940128
	ES 2114181	T3	19980516	ES 1994-908661	19940128
	US 5539016	A	19960723	US 1994-335016	19941107
	CN 1273978	A	20001122	CN 2000-108172	20000429
PRAI	US 1993-17056	A3	19930212		
	US 1994-183220	A3	19940118		
	WO 1994-US1015	W	19940128		

AB Vinyl- and acryl-functional siloxane monomers having polar fluorinated side chains having a H atom attached to a terminal difluoro-substituted C atom are prepd. and crosslinked to give hydrogels, useful as contact **lenses**. The presence of the polar fluorinated side chains improves the soly. of the siloxane monomers in the hydrophilic crosslinkers. Thus, polymn. of octamethylcyclotetrasiloxane with tetramethylcyclotetrasiloxane and bis(4-methacryloyloxybutyl)tetramethyldi siloxane in the presence of CF3SO3H gave a product that was heated 3-4 h at 75.degree. with allyloxyoctafluoropentane in the presence of tetramethyldisiloxane-Pt complex to give product (I) contg. 25 mol% octafluoro side chains. A 70:30 I-N,N-dimethylacrylamide soln. contg. Darocur 1173 was cast to give **lenses** that were extd. with 2-propanol and buffered saline soln. to give **lenses** with good wettability.

IC ICM C08F018-20
ICS C08F030-08; C08F230-08; C08G077-24
NCL 526242000
CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 63
ST fluorosiloxane unsatd hydrogel manuf; allyloxyoctafluoropentane methacryl terminated hydrosiloxane reaction; methylacrylamide crosslinked acryl fluorosiloxane; contact **lens** crosslinked unsatd fluorosiloxane; acryl fluorosiloxane hydrogel manuf; vinyl fluorosiloxane hydrogel manuf; macromonomer unsatd fluorosiloxane
IT Siloxanes and Silicones, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(acrylic, fluorine-contg., hydrogels for contact **lenses**)

IT Fluoropolymers
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(acrylic-siloxane-, hydrogels for contact **lenses**)

IT **Lenses**
(contact, crosslinkers for vinyl- and acryl-functional siloxane monomers having polar fluorinated side chains for manuf. of hydrogels)

IT **7351-61-3**, 3-Methacryloyloxypropyltrichlorosilane
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction with trimethylchlorosilane)

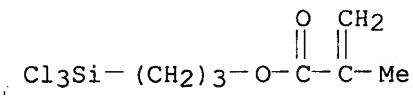
IT 36928-28-6DP, Octamethylcyclotetrasiloxane-tetramethylcyclotetrasiloxane copolymer, methacryloyloxybutyl-terminated, reaction products with allyloxyoctafluoropentane
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(vinyl compd.-crosslinked; hydrogels for contact **lenses**)

IT 3108-07-4DP, reaction products with methacryl-terminated siloxanes
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(vinyl compd.-crosslinked; hydrogels for contact **lenses**)

IT **7351-61-3**, 3-Methacryloyloxypropyltrichlorosilane
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction with trimethylchlorosilane)

RN 7351-61-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2002 ACS

AN 1987:617837 HCAPLUS

DN 107:217837

TI A process for the preparation of siloxane oligomers as intermediates for polymers used for medical supplies

IN Yamamoto, Akira; Takamizawa, Minoru; Ishihara, Toshinobu; Kurosaki, Tadao

PA Shin-Etsu Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

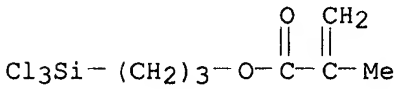
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62063596	A2	19870320	JP 1985-204781	19850917
	JP 02055439	B4	19901127		
	US 4727172	A	19880223	US 1986-905576	19860909
PRAI	JP 1985-202131		19850912		
	JP 1985-204781		19850917		

AB The title compds. R-Si[OSiMe2(CH2)2CF3]3 [I; R = H, ClCH2, H2C:CMeCO2(CH2)3], useful as intermediates for polymers used for medical supplies such as contact **lenses**, bandages, etc.(no data), are

prepd. To a soln. of MeMgCl in 300 mL THF was added dropwise 156 g siloxane trimer [(CF3CH2CH2)MeSiO]3 in 200 mL THF over 2 h and the mixt. was refluxed for 2 h, followed by addn. of 45 g HSiCl3 at reflux to give 146 g I (R = H).

IC ICM C07F007-18
ICA C08F030-08
CC 29-6 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 63
IT 1558-25-4, Chloromethyltrichlorosilane **7351-61-3** 10025-78-2
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(condensation of, with silyloxy salt)
IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(condensation of, with silyloxy salt)
RN 7351-61-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



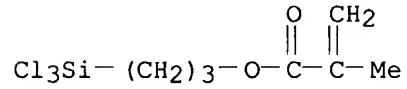
L11 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1987:428430 HCAPLUS
DN 107:28430
TI Contact **lenses**
IN Kubota, Satoshi; Mogami, Takao
PA Seiko Epson Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62038419	A2	19870219	JP 1985-178115	19850813

AB Contact **lenses** prepd. from polymers contg. CH2:CRCO2R1 (I) units (R = H, Me, F, F3C; R1 = CaHbF2a-b+1; a = 2-18; b = 0 to 2a-1), [CH2CH(OH)CH2O]c(CH2)d(SiR2R3O)eSiMe2CfHgF2f-g+1 (II) units [c = 0-1; d = 1-3; R2, R3 = Me, bis(trimethylsiloxy)methylsiloxy; (OSiMe2)kCiHjF2i-j+1; e,h = 0-3; f = 2-18; g = 0 to 2f-1], or [CH2CH(OH)CH2O]k(CH2)l(SiR4R5O)mSi R6R7R8 (III) units [k = 0,1; l = 1-3; R4,R5,R6,R7,R8 = Me, pentamethyldisiloxanyloxy; bis(trimethylsiloxy)methylsiloxy; m = 0-3] and .gtoreq.1 crosslinkable monomer units contg. acrylyl, acrylylamino, (allyloxy)carbonyl, vinyloxycarbonyl, or allyl carbonate groups have high O permeability and good staining resistance. 2,2,2-Trifluoro-1-(trifluoromethyl)ethyl methacrylate 80, 2,2,3,3,4,4-hexafluoro-1,5-pentanediol dimethacrylate 10, 2-hydroxyethyl methacrylate 10, and azobis(2,4-dimethylvaleronitrile) 0.15 part were mixed. The mixt. was then polymd. 6 h at 30.degree., 4 h at 35.degree., 3 h at 40.degree., 2 h at 45.degree., 2 h at 50.degree., 2 h at 60.degree., 2 h at 70.degree., 2 h at 90.degree., and 2 h at 110.degree. to give a polymer, which was cut and abraded to form a contact **lens** with O transmission 5.2 .times. 10-10 mL-cm/cm2-s-mmHg, good staining resistance, and low protein adhesion.

IC ICM G02C007-04
ICA C08F220-22; C08F220-28; C08F220-54; C08F230-08

CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 37
ST staining resistant fluoroacrylate contact **lens**; soft contact **lens** fluoroacrylate polymer; hard contact **lens** fluoroacrylate polymer; oxygen permeability high fluoroacrylate **lens**; protein adhesion low fluoroacrylate **lens**; silicon modified fluoroacrylate contact **lens**
IT **Lenses**
(contact, silicon-contg. fluoroacrylate polymers as, staining-resistant, with high oxygen permeability and low protein adhesion)
IT Siloxanes and Silicones, biological studies
RL: BIOL (Biological study)
(polyacrylate-, fluorine-contg., contact **lens** manuf, from)
IT Fluoropolymers
RL: BIOL (Biological study)
(polyacrylate-siloxane-, contact **lens** manuf, from)
IT 109033-13-8P 109033-16-1P 109033-17-2P 109033-19-4P 109033-20-7P
109033-21-8P 109033-22-9P 109033-23-0P 109033-24-1P 109033-25-2P
109033-26-3P 109033-87-6P 109055-03-0P 109055-04-1P 112718-99-7P
112719-00-3P 112719-01-4P
RL: PREP (Preparation)
(contact **lens**, manuf. of, staining-resistant, with high oxygen permeability and low protein adhesion)
IT 918-36-5P 104768-70-9P 109053-21-6P
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and polymn. of, with crosslinkable monomers, for contact **lenses**)
IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with trimethylsilanol and (tetrahydroperfluorooctadecyl)dimethylsilanol)
IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with trimethylsilanol and (tetrahydroperfluorooctadecyl)dimethylsilanol)
RN 7351-61-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)

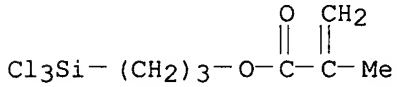


$Cl_3Si-(CH_2)_3-O-C(=O)-C(=CH_2)-Me$

L11 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1986:573972 HCAPLUS
DN 105:173972
TI Contact **lenses**
IN Kubota, Satoshi; Mogami, Takao
PA Seiko Epson K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI JP 61087102 A2 19860502 JP 1984-197462 19840920
AB Contact **lenses** which low n and good O permeability and compatibility with living tissue, which can be used continuously for a long time, are prepd. from polymers contg. CH2=CROCO2[CH2CH(OH)CH2O]t(CH2)m(SiR1R2O)nSi(Me)2Rf [R = H, Me; R1, R2 = Me, bis(trimethylsiloxy)methylsiloxy, (OSiMe2)pMe; Rf = C2-18 fluoroalkyl; t = 0, 1; m, n, p = 1-3]; hydrophilic monomers; and polyfunctional (meth)acrylates. Thus, heating CH2:CMeCO2CH2CH(OH)CH2OCH2Si(OSiMe3)2OSi(Me)2CH2CH2C3F7 79, 2-hydroxethyl methacrylate 14, and diethylene glycol dimethacrylate (I) 7 parts with tert-Bu peroxyneodecanoate at 28-105.degree. for 24.5 h gave a transparent copolymer with good machinability. A plasma-treated contact **lens** had n 1.381 and Shore hardness 58.
IC ICM G02B001-04
ICS C08F230-08; G02C007-04
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 63
ST oxygen permeability contact **lens**; methacrylate copolymer contact **lens**; siloxane methacrylate copolymer **lens**; fluoroalkyl siloxane methacrylate copolymer
IT **Lenses**
(contact, oxygen-permeable, from (fluoroalkyl)siloxanyl acrylate copolymers)
IT 104955-28-4 104955-30-8 104955-32-0 104955-34-2 104955-36-4 104955-38-6 104986-44-9 104986-46-1
RL: USES (Uses)
(contact **lenses**, with good oxygen permeability and low n)
IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with alkylsilanols and fluorosilanols)
IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with alkylsilanols and fluorosilanols)
RN 7351-61-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



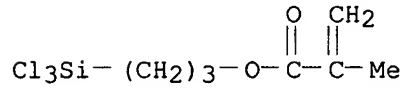
L11 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1983:476916 HCAPLUS
DN 99:76916
TI Hard contact **lenses** permeable to oxygen
PA Syntex (U.S.A.), Inc., USA
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58007124	A2	19830114	JP 1981-98456	19810626

AB O-permeable contact **lenses** are prepd. by polymg. silicone compds. with acrylates, methacrylates, and/or itaconates. Thus, bis(pentamethyldisiloxanyl)bis(trimethylsiloxy)methylsiloxanylmethacryloxy

propylsilane (I) [76936-95-3] was prepd. by treating trichloromethacryloxypropylsilane [**7351-61-3**] with pentamethyldisiloxanol [56428-93-4] and heptamethylisotrisiloxanol [5272-21-9]. I 45, Me methacrylate 50, methacrylic acid 3, triethylene glycol dimethacrylate 2 parts were mixed with tert-Bu peroxypivalate and held at 48.degree. for 24 to give a colorless, transparent, hard copolymer [76962-73-7]. The permeability to O was 21.4 .times. 10-11 (cm2/s)(O2 mL/mL .times. mm Hg).

IC G02C007-04; C08F220-10; C08F230-08
ICA A61F009-00
CC 63-7 (Pharmaceuticals)
ST contact **lens** permeability oxygen; acrylic polymer siloxane contact **lens**
IT Acrylic polymers, biological studies
RL: BIOL (Biological study)
(silicone-, for hard contact **lenses** permeable to oxygen)
IT Siloxanes and Silicones, biological studies
RL: BIOL (Biological study)
(acrylic, for hard contact **lenses** permeable to oxygen)
IT **Lenses**
(contact, hard, silicone-acrylic polymers prepn. for oxygen-permeable)
IT 76936-95-3P 76962-71-5P 86589-01-7P
RL: PREP (Preparation)
(prepn. of, for contact **lens** polymer manuf.)
IT 76962-72-6P 76962-73-7P 76962-76-0P 76962-77-1P 76962-78-2P
76962-79-3P 76962-80-6P 76984-65-1P 76984-66-2P 86589-48-2P
RL: PREP (Preparation)
(prepn. of, for hard contact **lenses** permeable to oxygen)
IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with siloxanols)
IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with siloxanols)
RN 7351-61-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L11 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1982:110184 HCAPLUS
DN 96:110184
TI Oxygen-permeable hard and semi-hard contact **lens** compositions and articles
IN Novicky, Nick N.
PA Tsuetaki, George F., USA
SO U.S., 8 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4303772	A	19811201	US 1979-72449	19790904

	JP 58007418	A2	19830117	JP 1981-98457	19810626
	WO 8301777	A1	19830526	WO 1981-US1530	19811118
	W: AT, AU, CH, DE, GB, JP, LU, NL, SE				
	RW: FR				
	AU 8279314	A1	19830601	AU 1982-79314	19811118
	AU 549045	B2	19860109		
	JP 58501291	T2	19830804	JP 1982-500076	19811118
	ZA 8108125	A	19821027	ZA 1981-8125	19811123
	CA 1169187	A1	19840612	CA 1981-391174	19811130
PRAI	US 1979-72449		19790904		
	WO 1981-US1530		19811118		

AB Polyalkylsiloxanylmethacryloxyalkylsilanes are copolymd. with alkyl acrylates or methacrylates to produce highly permeable contact **lens** materials. These copolymers include crosslinking agents and addnl. hydrophilic monomers. Contact **lenses** thus obtained are easily machined, polished into hard or semihard contact **lenses** having excellent dimensional stability and good O permeability and can be worn for a long time without discomfort. Thus, a soln. of trichloromethacryloxypropylsilane [**7351-61-3**] (82 g) in Et2O was treated with nonamethyltetrasiloxanol [80750-81-8] (which was prepd. by chlorination of nonamethyltetrasiloxane [77606-50-9] and subsequent chloride conversion to OH group) at -50.degree. in the presence of pyridine. Thirty-five parts monomer, tris(nonamethyltetrasiloxanyl)methac ryloxypropylsilane [80750-75-0], thus obtained was treated with Me methacrylate 60, methacrylic acid 2, diethylene glycol dimethacrylate 2 parts and tert-butylperoxy pivalate (0.14% of the mixt. by wt.) and polymd. This polymer was hard, colorless, rigid, transparent and O permeable.

IC C08F220-26; G02C007-04

NCL 526279000

CC 63-7 (Pharmaceuticals)

ST **lens** contact siloxane methacryloxyalkylsilane copolymer

IT Siloxanes and Silicones, biological studies
RL: DEV (Device component use); USES (Uses)
(acrylic, for contact **lenses**)

IT **Lenses**
(contact, siloxanylmethacryloxyalkylsilanes and methacrylate copolymers for)

IT Acrylic polymers, biological studies
RL: DEV (Device component use); USES (Uses)
(siloxane-, for contact **lenses**)

IT 80750-79-4
RL: DEV (Device component use); USES (Uses)
(for contact **lenses**)

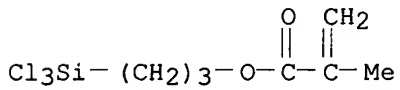
IT 80750-75-0P 80750-76-1P 80750-77-2P 80750-78-3P
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and polymn. of, with methacrylates, for contact **lenses**)

IT 80758-02-7P 80758-03-8P 80758-04-9P 80758-05-0P 80758-06-1P
80758-07-2P 80758-08-3P 80758-09-4P 80758-10-7P 80758-11-8P
80758-12-9P 80758-13-0P 80758-14-1P 80758-15-2P 80758-16-3P
80804-61-1P
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, for contact **lenses**)

IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with nonamethyltetrasiloxanol)

IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)

(reaction of, with nonamethyltetrasiloxanol)
RN 7351-61-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)

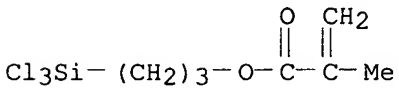


L11 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1981:197576 HCAPLUS
DN 94:197576
TI Oxygen-permeable hard and semihard contact **lens** compositions
IN Novicky, Nick N.
PA USA
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4248989	A	19810203	US 1979-74427	19790911

AB Acrylic or methacrylic copolymers with silicone substituted acrylic or methacrylic comonomers are prepd. to provide an O permeable, wettable, dimensionally stable, and hard or semihard material for corneal contact **lenses**. The monomer, bis(trimethylsiloxanyl)bis(trimethylsiloxy)m ethylsiloxanyl methacryloxypropylsilane (I) [77414-16-5] was synthesized from trichloromethacryloxypropyl silane [**7351-61-3**], trimethylsilanol [1066-40-6] and .beta.-hydroxyheptamethyltrisiloxane [5272-21-9]. A mixt. of the comonomer I 38, Me methacrylate 1.57, methacrylic acid 3, triethylene glycol dimethacrylate 2 parts, and tert-Bu peroxypivalate 0.14% by wt. of the entire mixt. was placed in a vacuum over at 48.degree. for 24 h. A hard, colorless, transparent and rigid plastic copolymer was formed. The O permeability was (8 .times. 10-m(cm2/s)(mL O2/mL .times. mm Hg).
IC C08F220-28; G02C007-04
NCL 526264000
CC 63-7 (Pharmaceuticals)
ST contact **lens** oxygen permeable; methacrylate siloxanyl contact **lens**
IT **Lenses**
(contact, acrylic siloxanes for)
IT Siloxanes and Silicones, biological studies
(methacryloyloxypropyl, for contact **lenses**, prepn of)
IT 77414-16-5P 77414-17-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn and reaction of, with methacrylates, for contact **lenses**)
IT 77451-02-6P 77451-03-7P 77451-04-8P 77451-05-9P 77451-06-0P 77451-07-1P 77451-08-2P 77468-28-1P 77468-29-2P
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn of, for contact **lenses**)
IT 77414-18-7P
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation);

USES (Uses)
(prepn. of, for contact **lenses**)
IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with trimethylsilanol and hydroxyheptamethylsiloxane)
IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with trimethylsilanol and hydroxyheptamethylsiloxane)
RN 7351-61-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)

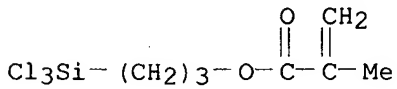


L11 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1981:145394 HCAPLUS
DN 94:145394
TI Oxygen permeable hard and semihard contact **lens** compositions, methods and articles of manufacture
IN Novicky, Nick N.
PA USA
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4242483	A	19801230	US 1979-66054	19790813
	EP 67254	A1	19821222	EP 1981-302597	19810611
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	EP 67909	A1	19821229	EP 1981-302598	19810611
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	ZA 8104023	A	19830126	ZA 1981-4023	19810615
	ZA 8104024	A	19830126	ZA 1981-4024	19810615
	CA 1251882	A1	19890328	CA 1986-512768	19860630
PRAI	US 1979-66054		19790813		

AB The title contact **lenses** were made from copolymers of polysiloxanyl alkyl acrylates or methacrylates with alkyl acrylates, methacrylates, or itaconates, and a crosslinking agent and hydrophilic monomer. Thus, a concavoconvex **lens** of 0.10 mm thickness was made from bis[bis(trimethylsiloxy)methylsiloxanyl]pentamethyldisiloxanylmethacryloxypropylsilane-Me methacrylate-cyclohexyl methacrylate-N-vinylpyrrolidone-triethylene glycol dimethacrylate copolymer [76962-72-6]. Prepns. of the siloxane monomers were given.
IC C08F220-28
NCL 526263000
CC 63-7 (Pharmaceuticals)
Section cross-reference(s): 35
ST polysiloxanyl acrylate contact **lens**; siloxane acrylate contact **lens**
IT **Lenses**
(contact, polysiloxanyl alkyl acrylate copolymers for oxygen permeable)
IT 76962-72-6P 76962-73-7P 76962-74-8P 76962-75-9P 76962-76-0P
76962-77-1P 76962-78-2P 76962-79-3P 76962-80-6P 76984-65-1P

76984-66-2P
RL: PREP (Preparation)
(prepn. of, for oxygen permeable contact **lenses**)
IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with methylsiloxanols)
IT **7351-61-3**
RL: **RCT (Reactant)**; RACT (Reactant or reagent)
(reaction of, with methylsiloxanols)
RN 7351-61-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



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L7 1 SEA FILE=REGISTRY ABB=ON 7351-61-3
L8 93 SEA FILE=HCAPLUS ABB=ON L7
L9 14 SEA FILE=HCAPLUS ABB=ON L8 AND (LENS? OR REFRACT?)
L10 40 SEA FILE=HCAPLUS ABB=ON L7(L)RCT/RL
L11 11 SEA FILE=HCAPLUS ABB=ON L9 AND L10
L12 3 SEA FILE=HCAPLUS ABB=ON L9 NOT L11

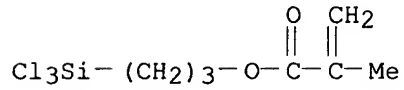
=> d l12 1-3 bib abs hitind hitstr 1-3

L12 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:234059 HCAPLUS
DN 132:252600
TI Antifog optical materials and their manufacture
IN Kawase, Akiko; Nakajima, Mikito
PA Seiko Epson Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000104046	A2	20000411	JP 1998-276229	19980929

AB The title optical materials, with good antifog property and scratch resistance, are prepd. by treating optical materials (e.g., eyeglasses, camera **lenses**, window glass) having oxides on the surface with silane coupling agents contg. unsatd. double bonds (e.g., .gamma.-glycidoxypropyltriethoxysilane, 3-methacryloxypropyltrichlorosilane, 3-methacryloyloxypropyl triethoxysilane), then fixing thiols having hydrophilic groups on branch chains or between hydrophobic groups (e.g., thiomalic acid) by ene-thiol reaction.
IC ICM C09K003-18
ICS C03C017-30; G02C011-08
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 73
ST eyeglass antifog unsatd silane coupling agent; camera **lens** antifog unsatd silane coupling agent; window glass antifog unsatd silane

coupling agent; thiomalic acid antifog optical material
IT Antifogging agents
Coupling agents
Eyeglass **lenses**
Optical materials
Windows
(antifog optical materials and manuf.)
IT **Lenses**
Lenses
(camera; antifog optical materials and manuf.)
IT Cameras
Cameras
(**lenses**; antifog optical materials and manuf.)
IT 2602-34-8, .gamma.-Glycidoxypropyltriethoxysilane **7351-61-3**, 3-Methacryloxypropyltrichlorosilane 21142-29-0, 3-Methacryloyloxypropyl triethoxysilane
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(coupling agents; antifog optical materials and manuf.)
IT **7351-61-3**, 3-Methacryloxypropyltrichlorosilane
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(coupling agents; antifog optical materials and manuf.)
RN 7351-61-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L12 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2002 ACS
AN 1990:163834 HCAPLUS
DN 112:163834
TI Tintable coatings for glass ophthalmic **lenses**
IN Brown, Jacqueline Leslie; Howe, Stephen Eric; Hultman, Sheryl Lynn
PA Corning, Inc., USA
SO Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 350247	A1	19900110	EP 1989-306747	19890703
	EP 350247	B1	19921014		
	R: DE, ES, FR, GB, IT				
	US 4977029	A	19901211	US 1988-215384	19880705
	CA 1320656	A1	19930727	CA 1989-602099	19890608
	IN 172552	A	19930925	IN 1989-MA498	19890627
	ES 2036345	T3	19930516	ES 1989-306747	19890703
	AU 8937826	A1	19900111	AU 1989-37826	19890704
PRAI	US 1988-215384		19880705		

AB The title coatings, applied to glass **lenses** in conjunction with an org. dye used in tinting org. plastic **lenses**, comprise essentially alkyl siloxanes contg. an effective amt. (2-20 vol.%) of a dipolar silane selected from ester-functional, hydroxy-functional,

amino-functional, and carboxylic acid-functional silanes, and their halide forms. The coating imparts <50% visible transmission to the **lenses**, is optically clear, has excellent resistance to abrasion, and is sufficiently adherent to the glass to withstand boiling water, normal surface abuse, and environmental stresses.

IC ICM C03C017-30
ICS C03C017-34

CC 57-1 (Ceramics)
Section cross-reference(s): 63

ST siloxane dipolar silane coating glass **lens**; org dye coating glass ophthalmic **lens**

IT Dyes
(org., in dipolar silane-contg. siloxane coatings for tintable glass ophthalmic **lenses**)

IT Coating materials
(siloxanes, contg. dipolar silanes, with org. dye, for tintable glass ophthalmic **lenses**)

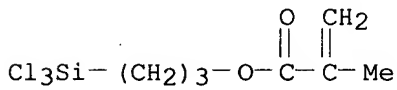
IT **Lenses**
(eyeglass, coatings for tintable, alkylsiloxane-based, dipolar silane and org. dye in)

IT 2530-85-0 **7351-61-3** 7538-44-5 17082-70-1 17945-05-0 18147-81-4 27668-52-6 35141-36-7
RL: USES (Uses)
(coatings contg. alkylsiloxanes and, with org. dye, for tintable glass ophthalmic **lenses**)

IT **7351-61-3**
RL: USES (Uses)
(coatings contg. alkylsiloxanes and, with org. dye, for tintable glass ophthalmic **lenses**)

RN 7351-61-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L12 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2002 ACS

AN 1989:199249 HCAPLUS

DN 110:199249

TI Oxygen-permeable contact **lens** materials containing methacryloyloxypropanediyl-terminated siloxanes and a method for their manufacture

IN Novicky, Nick N.

PA Devou, Maureen J., Can.

SO U.S., 8 pp.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4743106	A	19880510	US 1986-880668	19860630
	US 4861850	A	19890829	US 1988-153811	19880208
	CA 1300797	A1	19920512	CA 1988-568917	19880608
	BR 8900538	A	19891003	BR 1989-538	19890203
	US 4948855	A	19900814	US 1989-351798	19890515

US 5093447 A 19920303 US 1990-532660 19900604
PRAI US 1986-880668 19860630
US 1988-153811 19880208
US 1989-351798 19890515

AB Highly O-permeable hard and semihard contact **lenses** consist of polymers consisting of ethylenically unsatd. siloxanylalkoxy ester monomers, ethylenically unsatd. fluorocarbon ester monomers, and/or ethylenically unsatd. sulfone monomers; the contact **lenses** have an O permeability of .apprx.91 .times. 10-11 (cm2/s) (mL O2/mL-mmHg) at 35.degree.. The copolymer plastic can be modified by the incorporation of hardening, stability, and/or wettability agents. Trimethylsiloxymethacryloxyethoxysilane 40, cyclohexyl methacrylate 10, Me vinyl sulfone 8, tetrahydrofurfuryl methacrylate 20, 2-hydroxyethyl methacrylate 5, N-vinyl-2-pyrrolidone 7, Me methacrylate 7, and tert-Bu peroxypivalate 0.4 parts were polymd., producing a copolymer which had Shore D hardness (ASTM-2240) 86.

IC ICM G02C007-04
ICS C08F230-08
NCL 351160000R
CC 63-7 (Pharmaceuticals)

ST oxygen permeable hard contact **lens** siloxane; siloxane methacryloyloxypropanediyl terminated contact **lens**; contact **lens** siloxane methacryloyloxypropanediyl terminated

IT **Lenses**
(contact, oxygen-permeable, methacryloyloxypropanediyl-terminated siloxanes-contg.)

IT Siloxanes and Silicones, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fluoropolymer-polyoxyalkylene-, prepn. of, for oxygen-permeable hard contact **lenses**)

IT Polyoxyalkylenes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fluoropolymer-siloxane-, prepn. of, for oxygen-permeable hard contact **lenses**)

IT Fluoropolymers
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polyoxyalkylene-siloxane-, prepn. of, for oxygen-permeable hard contact **lenses**)

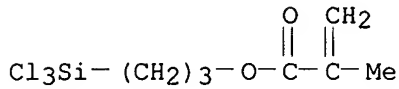
IT **7351-61-3**, Trichloromethacryloxypropylsilane
RL: BIOL (Biological study)
(condensation of, with tetrahydroperfluorohexanol)

IT 110301-62-7P
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and polymn. of, in manuf. of oxygen-permeable contact **lenses**)

IT 119709-01-2P 119709-02-3P 119709-03-4P 119709-04-5P 119709-05-6P
119709-07-8P 119709-09-0P 119709-13-6P 119709-15-8P 119709-16-9P
119709-18-1P 119709-19-2P 119709-20-5P 119709-21-6P 119709-22-7P
119709-24-9P 119727-78-5P 119727-79-6P 119727-80-9P 119727-81-0P
119727-82-1P 119727-83-2P 119727-84-3P 119727-85-4P 119760-07-5P
119760-08-6P 119760-09-7P 119779-61-2P 120472-09-5P
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, for oxygen-permeable hard contact **lenses**)

IT **7351-61-3**, Trichloromethacryloxypropylsilane
RL: BIOL (Biological study)
(condensation of, with tetrahydroperfluorohexanol)

RN 7351-61-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)

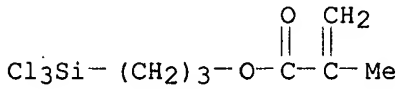


L12 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2002 ACS
AN 2000:234059 HCAPLUS
DN 132:252600
TI Antifog optical materials and their manufacture
IN Kawase, Akiko; Nakajima, Mikito
PA Seiko Epson Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000104046	A2	20000411	JP 1998-276229	19980929

AB The title optical materials, with good antifog property and scratch resistance, are prepd. by treating optical materials (e.g., eyeglasses, camera **lenses**, window glass) having oxides on the surface with silane coupling agents contg. unsatd. double bonds (e.g., .gamma.-glycidoxypropyltriethoxysilane, 3-methacryloxypropyltrichlorosilane, 3-methacryloyloxypropyl triethoxysilane), then fixing thiols having hydrophilic groups on branch chains or between hydrophobic groups (e.g., thiomalic acid) by ene-thiol reaction.
IC ICM C09K003-18
ICS C03C017-30; G02C011-08
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 73
ST eyeglass antifog unsatd silane coupling agent; camera **lens** antifog unsatd silane coupling agent; window glass antifog unsatd silane coupling agent; thiomalic acid antifog optical material
IT Antifogging agents
Coupling agents
Eyeglass **lenses**
Optical materials
Windows
(antifog optical materials and manuf.)
IT **Lenses**
Lenses
(camera; antifog optical materials and manuf.)
IT Cameras
Cameras
(**lenses**; antifog optical materials and manuf.)
IT 2602-34-8, .gamma.-Glycidoxypropyltriethoxysilane **7351-61-3**, 3-Methacryloxypropyltrichlorosilane 21142-29-0, 3-Methacryloyloxypropyl triethoxysilane
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(coupling agents; antifog optical materials and manuf.)
IT **7351-61-3**, 3-Methacryloxypropyltrichlorosilane
RL: PRP (Properties); TEM (Technical or engineered material use); USES

(Uses)
(coupling agents; antifog optical materials and manuf.)
RN 7351-61-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L12 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2002 ACS
AN 1990:163834 HCAPLUS
DN 112:163834
TI Tintable coatings for glass ophthalmic **lenses**
IN Brown, Jacqueline Leslie; Howe, Stephen Eric; Hultman, Sheryl Lynn
PA Corning, Inc., USA
SO Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 350247	A1	19900110	EP 1989-306747	19890703
	EP 350247	B1	19921014		
	R: DE, ES, FR, GB, IT				
	US 4977029	A	19901211	US 1988-215384	19880705
	CA 1320656	A1	19930727	CA 1989-602099	19890608
	IN 172552	A	19930925	IN 1989-MA498	19890627
	ES 2036345	T3	19930516	ES 1989-306747	19890703
	AU 8937826	A1	19900111	AU 1989-37826	19890704
PRAI	US 1988-215384		19880705		

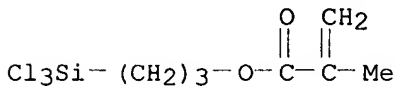
AB The title coatings, applied to glass **lenses** in conjunction with an org. dye used in tinting org. plastic **lenses**, comprise essentially alkyl siloxanes contg. an effective amt. (2-20 vol.%) of a dipolar silane selected from ester-functional, hydroxy-functional, amino-functional, and carboxylic acid-functional silanes, and their halide forms. The coating imparts <50% visible transmission to the **lenses**, is optically clear, has excellent resistance to abrasion, and is sufficiently adherent to the glass to withstand boiling water, normal surface abuse, and environmental stresses.
IC ICM C03C017-30
ICS C03C017-34
CC 57-1 (Ceramics)
Section cross-reference(s): 63
ST siloxane dipolar silane coating glass **lens**; org dye coating glass ophthalmic **lens**
IT Dyes
(org., in dipolar silane-contg. siloxane coatings for tintable glass ophthalmic **lenses**)
IT Coating materials
(siloxanes, contg. dipolar silanes, with org. dye, for tintable glass ophthalmic **lenses**)
IT **Lenses**
(eyeglass, coatings for tintable, alkylsiloxane-based, dipolar silane and org. dye in)
IT 2530-85-0 **7351-61-3** 7538-44-5 17082-70-1 17945-05-0

18147-81-4 27668-52-6 35141-36-7
RL: USES (Uses)
(coatings contg. alkylsiloxanes and, with org. dye, for tintable glass ophthalmic **lenses**)

IT **7351-61-3**
RL: USES (Uses)
(coatings contg. alkylsiloxanes and, with org. dye, for tintable glass ophthalmic **lenses**)

RN 7351-61-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trichlorosilyl)propyl ester (9CI) (CA INDEX NAME)



L12 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2002 ACS

AN 1989:199249 HCAPLUS

DN 110:199249

TI Oxygen-permeable contact **lens** materials containing methacryloyloxypropanediyl-terminated siloxanes and a method for their manufacture

IN Novicky, Nick N.

PA Devou, Maureen J., Can.

SO U.S., 8 pp.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4743106	A	19880510	US 1986-880668	19860630
	US 4861850	A	19890829	US 1988-153811	19880208
	CA 1300797	A1	19920512	CA 1988-568917	19880608
	BR 8900538	A	19891003	BR 1989-538	19890203
	US 4948855	A	19900814	US 1989-351798	19890515
	US 5093447	A	19920303	US 1990-532660	19900604
PRAI	US 1986-880668		19860630		
	US 1988-153811		19880208		
	US 1989-351798		19890515		

AB Highly O-permeable hard and semihard contact **lenses** consist of polymers consisting of ethylenically unsatd. siloxanylalkoxy ester monomers, ethylenically unsatd. fluorocarbon ester monomers, and/or ethylenically unsatd. sulfone monomers; the contact **lenses** have an O permeability of .apprx.91 .times. 10-11 (cm2/s) (mL O2/mL-mmHg) at 35.degree.. The copolymer plastic can be modified by the incorporation of hardening, stability, and/or wettability agents. Trimethylsiloxymethacryloxyethoxysilane 40, cyclohexyl methacrylate 10, Me vinyl sulfone 8, tetrahydrofurfuryl methacrylate 20, 2-hydroxyethyl methacrylate 5, N-vinyl-2-pyrrolidone 7, Me methacrylate 7, and tert-Bu peroxypivalate 0.4 parts were polymd., producing a copolymer which had Shore D hardness (ASTM-2240) 86.

IC ICM G02C007-04
ICS C08F230-08

NCL 351160000R

CC 63-7 (Pharmaceuticals)

ST oxygen permeable hard contact **lens** siloxane; siloxane

methacryloyloxypropanediyl terminated contact **lens**; contact **lens** siloxane methacryloyloxypropanediyl terminated

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119727-82-1P 119727-83-2P 119727-84-3P 119727-85-4P 119760-07-5P
119760-08-6P 119760-09-7P 119779-61-2P 120472-09-5P
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